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 blowby issues. This upgrade is highly recommended if you do any heavy towing.

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!

Part #:	PU-COATING-6CYL	Engine:	5.9L-6.7L 24V Cummins Common Rail
Date:	05/01/2020	Part:	Coated Piston Upgrade

5.9L 24V - 6.7L 24V Cummins Coated Piston Upgrade



- With the thermal barrier coating in the dish, it protects the piston dish against possible overheat and melting conditions found in todays high exhaust gas temperature applications.
- With the Teflon coating on the skirt, there is less friction at start up. Cylinder wall and
 piston skirt scuffing and gaulding are greatly reduced. It's used in all performance
 applications and is particularly used by Cummins in all high horsepower and some
 marine applications.

Available for all 5.9L 24V Common Rail Engines 2003-2007 and various 6.7L 24V Common Rail Engines (Piston Kit 4955481-4376354-4956007-4376348).

Part #:	PU-4376354	Engine:	6.7L Cummins - 2007 to 2018 year models
Date:	04/03/2023	Part:	Heavy Duty Upgrade

6.7L Cummins Heavy Duty Piston Upgrade







OE Piston Bowl

- The piston on the left represents an optional open bowl piston design. Note the piston bowl with no sharp angles that would normally be exposed to flame travel and high exhaust gas temperatures. This "Open Bowl" design reduces piston overheating or breaking.
- The piston on the right represents a stock OE piston bowl design. Note the sharp edges
 prone to overheating and cracking. This design has been known to fail under severe duty
 usage. The sharp angles are exposed to flame travel and exhaust gas temperatures that
 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.

Includes the optional piston coating upgrade. Teflon coated piston skirt and thermal barrier coated piston dish.

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 reduces 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.

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

Part #:	MPL-201	Engine:	All Engines
Date:	11/06/2017	Part:	Priming System

Melling Oil Primer MPL-201



Failure to properly prime oil system will damage engine and void your warranty. Do not use starter to prime oil system. Use an engine oil priming tank such as MPL-201.



To order this tool contact your sales associate.

Part #:	ZDDP0616	Engine:	All Engines
Date:	06/16/2016	Part:	Zinc/Phosphorus Oil Additive

ZDDP ZINC AND PHOSPHORUS OIL ADDITIVE

ZDDP (Zinc Dialkyldithiophosphates) is an additive found in motor oils that serve as an anti-wear agent where any metal to metal contact is made in an engine. Flat tappet camshafts, timing gears, piston skirts, piston rings, bearings, rocker arms, etc. are some of the high wear metal to metal contact points that benefit from the ZDDP protection.

In recent years, the EPA has mandated the critical anti-wear additive ZDDP be reduced in motor oils, much like removing lead from gasoline. Back in the 1980s, motor oil typically contained around 1500 PPM (parts per million) of ZDDP. In the 1990s, that was reduced to 1200 PPM, then down to around 800 PPM in 2005.

The demand for longer drain intervals has also caused the amount of detergent to increase, which interferes with the anti-wear protection provided by ZDDP and compounds the problem.

The target range of ZDDP should be 1800 PPM to 2000 PPM for maximum protection.

Adding a 4oz bottle of ZDDPlus® Oil additive to every 5 quarts of your typical diesel motor oil will increase the ZDDP levels by 1256 PPM (Phosphorus) and 1751 PPM (Zinc). 1 to 2 bottles per oil change will put the levels back where they should be.

1 - 4oz bottle of ZDDPlus® oil additive has the same concentration of ZDDP as two quarts of the Lucas® additive.

Product	Amount Used	Phospho- rus (ppm)	Zinc (ppm)
ZDDPlus®	4	51,500	71,800
Lucas®	16	5,000	43,000
Typical Die- sel Motor Oil	160	600	800

Target ppm Zinc	Ounces of	Ounces of	
& Phosphorus	ZDDPlus®	Lucas®	
Concentration			
1000	1.3	11.4	4 l + l - l @
1100	1.7	14.3	1 bottle Lucas®
1200	2.0	17.2	
1300	2.3	20.0	
1400	2.7	22.9	
1500	3.0	25.7	
1600	3.3	28.6	2 h - #l l ®
1700	3.7	31.5	2 bottles Lucas®
1800	4.0	34.3	1 bottle ZDDPlus®
1900	4.3	37.2	
2000	4.7	40.0	REV 3 SV 10/23/202
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