



CHROMIUM (CR) + MOLYBDENUM (MO) = IPD STRONG LINERS FOR ISX!



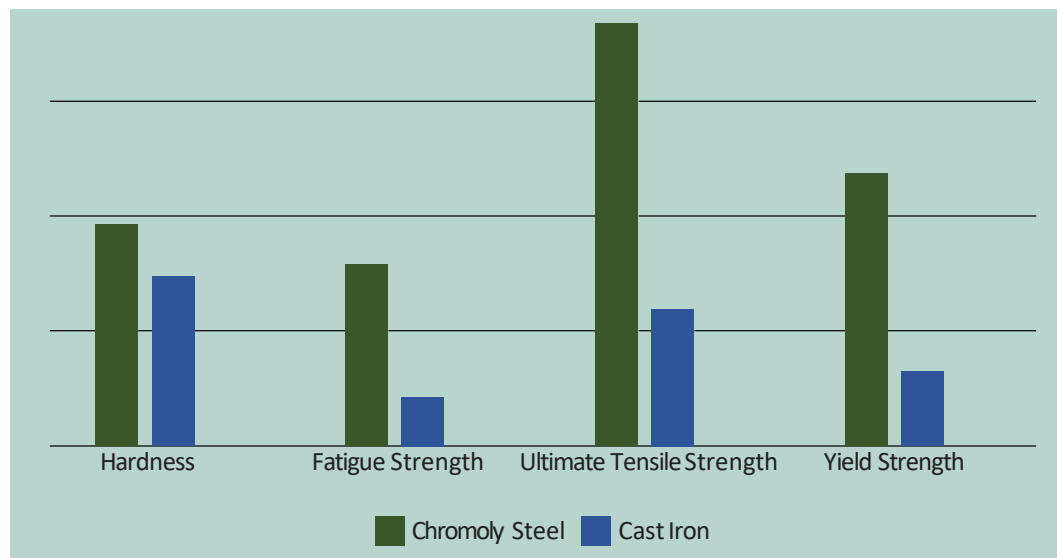
IPD continues its industry reputation for innovation, not imitation.

IPD's in-house engineering team used computational FEA (Finite Element Analysis) to develop an improved ISX and ISX15 steel liner that performs better than the original cast iron liner.

The results: **Never has there been a stronger, more durable cylinder liner than IPD's new chromoly steel cylinder liner for Cummins® ISX applications.** Traditional cast iron cylinder liners can crack and fail leading to catastrophic engine block damage and destruction.

The benefits of IPD's steel liner:

- A steel liner can withstand piston seizure without brittle failure to the lower liner section. Cast iron liners can fail and destroy the cylinder block.
- Chromoly steel offers an ultimate tensile strength (UTS) that is 2 to 3 times more than the ultimate tensile strength of ductile cast iron.
- Chromoly steel offers increased toughness on the inside (for improved wear life) and on the outside (for improved resistance to cavitation).
- Made from a seamless tube of high quality chromoly steel (no weld seam that can crack)
- This new steel liner for the ISX follows the successful 2017 launch of our chromoly steel cylinder liner for the Cat C18/C32.



IPD PROVES THE CHROMOLY CYLINDER LINER CAN WITHSTAND PISTON SEIZURE

THE TEST:

IPD's Product Development Team put a standard stock Cummins ISX engine, equipped with IPD steel liners, and intentionally plugged the piston cooling tubes to force it to seize to see what would happen. We attached the engine to a testing dynamometer and after many minutes it began smoking and eventually seized. The block held together and the **cylinder liners did not crack due to the incredible strength of steel!** Chromoly steel provides increased tensile strength and increased ductility allowing the material to absorb more stress than cast iron. *Please note: no liner can withstand a complete seizure, even a steel liner can break, but IPD believes the steel liner will give the truck owner the necessary time to get the engine shut off before the engine block is destroyed.*

To see the power of steel for yourself, check out the video IPD created at www.ipdparts.com/gotsteel



The engine begins to seize (top). The block held together and the cylinder liners did not crack due to the incredible strength of steel.

IPD ISX Steel Cylinder Liner Kit 4309389STL is an optional liner available in the following kits:

Item Number
IF1878/96/STL
IF1879/96/STL
IF4089154/95/STL
IF4089406/95/STL
IF4089406/96/STL
IF5966/95/STL
IF5967/95/STL

IPD PRODUCT AVAILABILITY:

IPD provides a wide range of quality, precision-engineered parts for ISX and ISX15 engines including:

- Engine Overhaul Kits
- Pistons
- Valvetrain Components
- Engine Bearings
- Gasket Sets
- Water Pumps and Miscellaneous items

Visit your IPD distributor to put new IPD steel cylinder liners in your ISX or ISX15 today or order online through IPDNet at store.ipdparts.com



IPD

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