

Parts Professional 67

The Genuine Cummins Overhaul



The Genuine Cummins Overhaul

INTRODUCTION

Cummins products are built to serve customers over the long life of the product. When it comes time to extend the life of those products, Cummins provides the right solutions. To provide the highest level of quality service, Cummins offers different options to meet the specific needs of customers given their circumstances.

This training will focus on the customer's option to overhaul an engine with a Genuine Cummins Overhaul. You will learn about the key considerations of an overhaul and how this option works to keep an engine going and to provide the most value.



The Genuine Cummins Overhaul

WHAT IS A GENUINE CUMMINS OVERHAUL?

A **Genuine Cummins Overhaul** is a service event performed by a Cummins Distributor or Authorized Dealer, in which vital, internal components of the engine are replaced. Engines have many parts that wear out over time, and through an overhaul, customers can refresh the engine by replacing some of the worn parts.

Now, lets look at the value of an overhaul and why a customer would choose to get an overhaul.





The Genuine Cummins Overhaul

WHY GET A GENUINE CUMMINS OVERHAUL?

The value in a **Genuine Cummins Overhaul** is the total package that it provides to customers in need of an engine repair. The following key benefits highlight why to get an overhaul and the value that Cummins provides in the service:

(Click on each box to learn more)

Brings Back Original Engine Performance

Features Latest Product Updates

Saves Money by Bundling Parts Purchases

Includes Full Cummins One Year Warranty

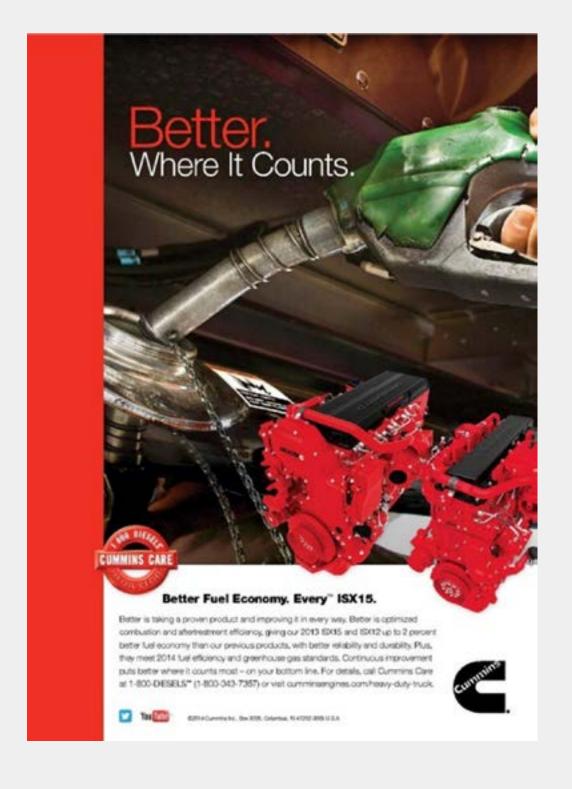
Provides Many More Miles/Hours of Dependable Cummins Power



The Genuine Cummins Overhaul

BRINGS BACK ORIGINAL ENGINE PERFORMANCE

As an engine ages, fuel economy and oil consumption naturally deteriorate due to the number of hours, miles or duty cycle of the engine. Replacement of certain components during an overhaul helps to restore fuel economy and to reduce oil consumption to extend the life of the engine.

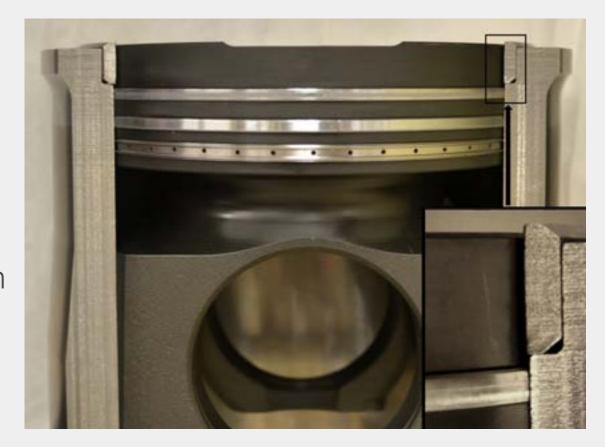




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FEATURES LATEST PRODUCT UPDATES

Cummins continuously works to enhance the performance characteristics, fuel economy and total cost of ownership of its products. When improvements are made, they are incorporated into **Genuine Cummins Parts** and included in overhaul kits. For example, new cylinder liners with the anti-polishing ring (APR Cylinder Liner pictured at right), a recent product update, were added following the improvement and are



APR Cylinder Liner

now included in kits for the ISX 15 to extend the life of this key component.

Note: Non-Genuine parts do not include these product updates, an important reason to **buy Genuine.**



The Genuine Cummins Overhaul

SAVES MONEY BY BUNDLING PARTS PURCHASES

A Genuine Cummins Overhaul includes overhaul kits that bundle parts together in a package to reduce the overall cost of the parts. Furthermore, for the ISX 12 and ISX15, N14, ISM and M11 engines in North America, a marketing promotion called the Cummins Overhaul Program is available and allows customers to save even more on the package when additional parts are purchased (click here to learn about the Cummins Overhaul Program)



Note: Programs can be developed or enhanced on a yearly basis to benefit customers and all information on these programs is under the <u>Promotions tab on Quickserve.</u>



The Genuine Cummins Overhaul

INCLUDES FULL CUMMINS ONE YEAR WARRANTY

Cummins base warranty is guaranteed to cover customers for up to 1 year, 100,000 miles (160,935 km).

An additional warranty option available in North America is the NOW (National Overhaul Warranty) program, which covers parts replaced, workmanship as well as those components inspected but not replaced. It extends the 1 year warranty up to 2 years, 200,000 miles for heavy duty engines, and up to 3 years, 150,000 miles for MidRange engines. Available at NOW certified locations.

(click here to learn more)

North America Heavy Duty NOW Program

North America MidRange NOW Program

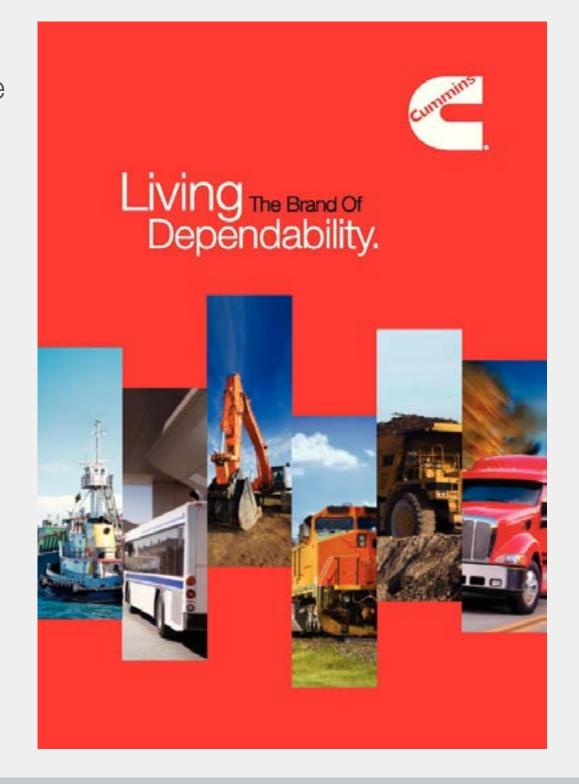


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Why Get a Genuine Overhaul?

FEATURES LATEST PRODUCT UPDATES

Cummins products are tested and proven to be dependable over the long life of the product. The **Genuine Cummins Overhaul** is one important component in the process to extend the life of these dependable products.





The Genuine Cummins Overhaul

When to Get a Genuine Overhaul

WHEN TO GET A GENUINE OVERHAUL

Now that you know what an overhaul is and the value it provides customers, you will now be presented with three scenarios on when the customer should get an overhaul. Below you can test yourself by selecting one of the three correct scenarios below.

Circumstance Example
Increased fuel consumption is an example of which scenario?



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When to Get a Genuine Overhaul

WHEN TO GET A GENUINE OVERHAUL

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Circumstance Example
Upgrading an engine is an example of which scenario?



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When to Get a Genuine Overhaul

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Circumstance Example

A dropped valve is an example of which scenario?



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When to Get a Genuine Overhaul

WHEN TO GET A GENUINE OVERHAUL

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Circumstance Example
Selling your engine is an example of which scenario?



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When to Get a Genuine Overhaul

WHEN TO GET A GENUINE OVERHAUL

Now that you know what an overhaul is and the value it provides customers, you will now be presented with three scenarios on when the customer should get an overhaul. Below you can test yourself by selecting one of the three correct scenarios below.

Circumstance Example
Increased blowby is an example of
which scenario?



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When to Get a Genuine Overhaul

WHEN TO GET A GENUINE OVERHAUL

Now that you know what an overhaul is and the value it provides customers, you will now be presented with three scenarios on when the customer should get an overhaul. Below you can test yourself by selecting one of the three correct scenarios below.

Circumstance Example

A cracked cylinder head is an example of which scenario?



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When to Get a Genuine Overhaul

WHEN TO GET A GENUINE OVERHAUL

Now that you know what an overhaul is and the value it provides customers, you will now be presented with three scenarios on when the customer should get an overhaul. Below you can test yourself by selecting one of the three correct scenarios below.

Circumstance Example

Looking to get more years of use is an example of which scenario?



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When to Get a Genuine Overhaul

WHEN TO GET A GENUINE OVERHAUL

Now that you know what an overhaul is and the value it provides customers, you will now be presented with three scenarios on when the customer should get an overhaul. Below you can test yourself by selecting one of the three correct scenarios below.

Circumstance Example
Increased oil consumption is an example of which scenario?



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When to Get a Genuine Overhaul

WHEN TO GET A GENUINE OVERHAUL

Now that you know what an overhaul is and the value it provides customers, you will now be presented with three scenarios on when the customer should get an overhaul. Below you can test yourself by selecting one of the three correct scenarios below.

Circumstance Example

Excessive noise or vibration is an example of which scenario?



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When to Get a Genuine Overhaul

WHEN TO GET AN OVERHAUL?

Answer key:

When to Overhaul Scenario

When You Experience Noticeable Changes in Your Engine's Performance

Increased fuel consumption is an example of a noticeable change in your engines performance

Increased blowby is an example of a noticeable change in your engines performance

Increased oil consumption is an example of a noticeable change in your engines performance

Excessive noise or vibration is an example of a noticeable change in your engines performance

When You Want to Increase Your Engine's Life and Resale Value

Upgrading your engine is an example of increasing your engine's life and resale value

Looking to sell your engine is an example of a time when you want to increase your engine's resale value

Looking to get more years of use is an example of a time when you want to increase your engine's life

During a Major Unplanned Repair Event

A Cracked cylinder head is an example of a major unplanned repair event

A Dropped valve is an example of a major unplanned repair event



The Genuine Cummins Overhaul

Overhual Kits

OVERHAUL KITS

Let's now look at the specific contents that come with an overhaul. An overhaul kit is a basic package of key components needed to overhaul an engine. Power cylinder components and many of the major upper and lower engine gaskets and seals are included in "mini-kits" in these packages. Customers choose variations based on cost management and future planned usage of their engine. The basic kits can vary between engine families but are fairly consistent. Click on each of the engines below from different engine classes to learn more (Click on each engine family below to learn more).



MidRange



Heavy-Duty



High Horse Power



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Overhual Kits

OVERHAUL KITS

There are overhaul kits available for the following MidRange engines: 4B, 6B, 6C, C8.3 ISC/QSC & ISL/QSL. Most overhaul kits sold are for the ISC and ISL engines. Depending on the engine, some kits come with cylinder liners, referred to as wet liners, whereas others are parent-bore engines and do not come with the cylinder liners (see list below). Also, see the list below to learn what is in a basic MidRange overhaul kit.

List of Parts that are in a basic ISC overhaul:

- 1.Cylinder Liner Kit
- 2. Piston Kit
- 3. Main Bearing Kit
- 4. Upper Engine Gasket Kit
- 5. Connecting Rod Bearings
- 6. Oil Pan Gasket
- 7. Oil Bypass Valve Plunger



Example: B Series 6.7 Overhaul Kit Note: Parts vary between MidRange Overhaul kits

Wet-liner: 8.3L and 8.9L; **Cylinder liners available**Parent bore 3.9L, 3.8L, 5.9L, 4.5L, 6.7L; **Salvage sleeves available**



The Genuine Cummins Overhaul

Overhual Kits

HEAVY DUTY OVERHAUL KITS

Most overhaul kits in North America are for heavy-duty engines due to the high population of heavy-duty engines as well as the wide range of applications in which these engines are used. There are overhaul kits available for the following heavy-duty engines: ISX/QSX, ISM/QSM, N14, M11, L10 and NH/NT855.

List of Parts in ISX overhaul kit:

- 1. Cylinder Liner Kit
- 2. Piston Kit
- 3. Main Bearing Kit
- 4. Upper Engine Gasket Kit
- 5. Connecting Rod Bearing
- 6. Oil Pan Gasket (Not for ISX)
- 7. Oil Bypass Valve Plunger



Example: ISX Overhaul Kit

Note: Parts vary between heavy-duty overhaul kits



The Genuine **Cummins Overhaul**

Overhual Kits

HIGH HORSEPOWER OVERHAUL KITS

Overhaul kits are also now becoming available for high horsepower engines. One high horse power engine with a basic overhaul kit available now is the K19 Marine engine.

List of Parts in a K19 basic overhaul kit:

Connecting Rod Bearing

Liner Kit

Lower Engine Gasket Set

Upper Engine Gasket Set

Main Bearing Set



Example: K19 Overhaul Kit

Note: Parts will vary between high horse power overhaul kits



The Genuine Cummins Overhaul

Overhual Process

OVERHAUL PROCESS

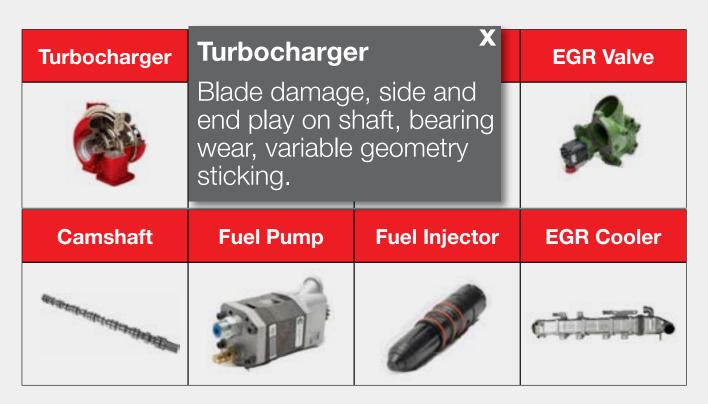
Turbocharger	Cylinder Head	Crankshaft	EGR Valve
	Of Olympia	White the same of	
Camshaft	Fuel Pump	Fuel Injector	EGR Cooler



The Genuine Cummins Overhaul

Overhual Process

OVERHAUL PROCESS





The Genuine Cummins Overhaul

Overhual Process

OVERHAUL PROCESS

Turbocharger	Cylinder Head	Cylinder Head X		
	Of Olympian	Worn valve guides and seals, cracked valve seats.		
Camshaft	Fuel Pump	Fuel Injector	EGR Cooler	
essure distribution de la constitución de la consti				



The Genuine Cummins Overhaul

Overhual Process

OVERHAUL PROCESS

Turbocharger	Cylinder Head	Crankshaft	Crankshaft (Visual	
	Of Olympia	White the same of	Inspection) Grooves, poo area.	r surface
Camshaft	Fuel Pump	Fuel Injector	EGR Cooler	



The Genuine Cummins Overhaul

Overhual Process

OVERHAUL PROCESS





The Genuine Cummins Overhaul

Overhual Process

OVERHAUL PROCESS

Turbocharger	Cylinder Head	Crankshaft	EGR Valve
	Of Olympia	White the same of	
Camshaft	Camshaft (Visual Inspection)		EGR Cooler
Contraction of the last of the	Flattened lobes, scored cam lobes.		



The Genuine Cummins Overhaul

Overhual Process

OVERHAUL PROCESS

Turbocharger	Cylinder Head	Crankshaft	EGR Valve
	O DE LOS DE	White the same of	
Camshaft	Fuel Pump	Fuel Pump (\	
and the second second		Inspection) Worn seals, leakage, pump calibration.	



The Genuine Cummins Overhaul

Overhual Process

OVERHAUL PROCESS

Turbocharger	Cylinder Head	Crankshaft	EGR Valve	
	Of Olympia and	White the same of		
Camshaft	Fuel Pump	Fuel Injector	Fuel Injector	. X
			Decreased fue improper com cylinders, ove damaged noz	nbustion in r-fueling,



The Genuine Cummins Overhaul

Overhual Process

OVERHAUL PROCESS

Turbocharger	Cylinder Head	Crankshaft	EGR Valve
	Of Olympian	White the same of	
Camshaft	EGR Cooler X		EGR Cooler
	Leakage or	coolant loss.	



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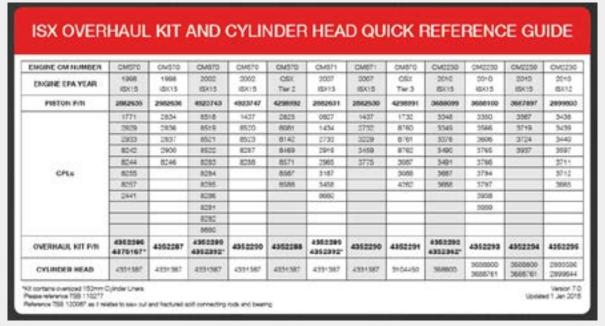
Parts Finding

PARTS FINDING

- All information on overhaul kits can be found on QuickServe Online, which gives parts and service professionals access to information for over 15 million Cummins engines.
- All overhaul kits have an assigned part number. The engine serial number (ESN, which can be found on the engine data plate) can be used to locate the correct kit within the parts catalog System View.
- The <u>Cylinder/Overhaul Kit tool</u> under the Parts Related Information tab can also be used to find the part number by CPL.
- Other resources such as overhaul kit reference guides for certain engine classes can be found on QuickServe Online under the Promotions tab.



Searching by CPL



ISX Overhaul Kit Reference Guide



The Genuine Cummins Overhaul

The Genuine Advantage

Curninin's

THE GENUINE PARTS AND SERVICE ADVANTAGE

Cummins possesses an exceptionally broad and capable distribution and customer support network. The Cummins channel for an overhaul can meet and exceed customer expectations due to its ability to conduct repair and maintenance events worldwide by providing:



7,100+ Service Locations Worldwide

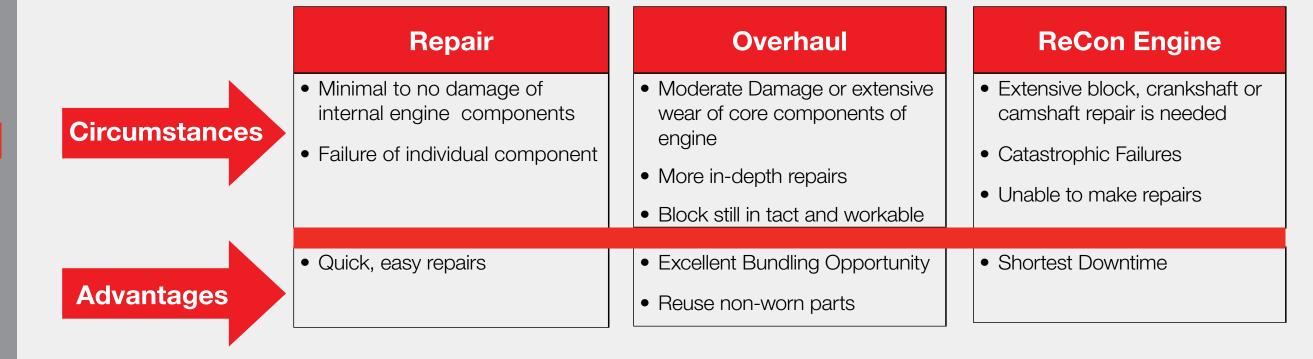


The Genuine Cummins Overhaul

A Menu Of Options

A MENU OF OPTIONS

The **Genuine Cummins Overhaul** is one valuable option out of a menu of options to meet and exceed customers needs. Other key options on the menu include basic repairs, as well as the option to swing a **ReCon engine** (please refer to Parts Professional 64 to learn more about ReCon engines and components). Below you will see general circumstances for choosing each option and what advantages each option holds.





The Genuine Cummins Overhaul

Summary

SUMMARY

In summary, the **Genuine Cummins Overhaul** is a value-adding service to customers who want to get the most out of their Cummins product. You have learned why to get an overhaul, when to get an overhaul as well as important details involved in the service that Cummins provides through the overhaul. Now, test your learning by taking a quiz on this training. Parts Professional 64 to learn more about ReCon engines and components). Belowyou will see general circumstances for choosing each option and what advanta



The Genuine Cummins Overhaul

CONGRATULATIONS!

You have completed Parts Pro 67.

Now let's test your knowledge with a quiz.



The Genuine Cummins Overhaul

Quiz



QUIZ

QUESTION ONE

The marketing promotion for heavy-duty engines called the Cummins Overhaul Program is an example of which reason to get an overhaul?

- (a) Product Updates
- **(b)** Reduces blowby
- (c) Restores Fuel Economy
- (d) Saves money in Bundling Parts

Get all 10 questions right and receive a Cummins branded flash light.



Quiz



QUIZ

QUESTION TWO

The **Genuine Cummins Overhaul**brings back the engine's original
performance, features product updates,
saves money by bundling parts as well
as

- (a) Includes a ReCon engine
- **(b)** Provides a 1 year warranty
- (c) Includes a crankshaft
- (d) Provides a 6 month warranty



Quiz



QUIZ

QUESTION THREE

An example in this training of a product update featured in an overhaul kit is:

- (a) Piston Ring
- **(b)** Oil Pan Gasket
- (c) APR Cylinder Liners
- (d) Piston pin



Quiz



QUIZ

QUESTION FOUR

Which of the following is **not** included in the list of scenarios of when to get an overhaul?

- (a) When you experience noticeable changes in your engines performance
- **(b)** Immediately following the purchase of an engine
- (c) When you want to increase the engine's resale value
- (d) During a major unplanned repair event

The Genuine Cummins Overhaul

Quiz



QUIZ

QUESTION FIVE

Increased fuel consumption, increased blowby, increased oil consumption and _____ are examples of slight, noticeable changes in an engines performance?

- (a) A Dropped Valve
- **(b)** A Cracked Cylinder Head
- (c) Product Upgrades
- (d) Excessive noise and vibration

The Genuine Cummins Overhaul

QUIZ

Quiz



QUESTION SIX

True or False: An overhaul kit contains power cylinder components with many of the major upper and lower engine gasket kits in "mini kits".

- (a) True
- **(b)** False



QUIZ

Quiz



QUESTION SEVEN

True or False: All MidRange engine overhaul kits come with cylinder liners.

- (a) True
- **(b)** False



Quiz



QUIZ

QUESTION EIGHT

Which of the following major components not included in a basic overhaul kit are always inspected during an overhaul event?

- (a) Fuel Pump
- **(b)** Turbocharger
- (c) EGR Cooler
- (d) All of the above



Quiz



QUIZ

QUESTION NINE

Which of the following Heavy-Duty
Engines is one in a list of engines that
have overhaul kits available:

- (a) ISC
- **(b)** L10
- (c) ISL
- (d) None of the above



Quiz



QUIZ

QUESTION TEN

The Genuine Parts and Service

Advantage that Cummins provides can
be found in:

- (a) 7,100+ Service Locations around the world
- **(b)** Factory trained technicians
- (c) Best-in-Class warranty
- (d) All of the above

The Genuine Cummins Overhaul

CONGRATULATIONS!

You have completed Parts Pro 67.

