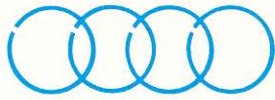




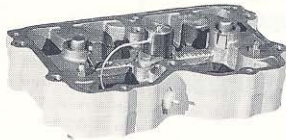
PARTS PRO CLASSIC

CLASSIC EDITION #11

Parts Pro Classic is provided as a historical reference. Special offers, prizes and awards no longer apply to this edition. Current Parts Pro issues along with all Parts Pro Classics may be found at [click\) qsol.cummins.com](http://qsol.cummins.com).



Cummins
Parts Professional



TIPS
from the Professionals



Cummins parts professional **11**

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Parts Professional 11 Reply Card

Check here if this is a new address

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(if applicable)

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(if applicable)

Comments or Suggestions:



Fill this card out and send it in to help us maintain our mail list.



Fill this card out and send it in to be put on the Parts Professional mail list and receive future issues. **Cards must be completely filled out in order to be processed.**



Parts Professional 11 Enrollment Card

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Distributor Code _____
(if applicable)

Dealer Code _____
(if applicable)

Company Name _____

Street _____

City _____ State _____ Zip _____

Please send me previous issues yes ____ no ____

Letter from the Editor

Welcome to Parts Professional 11!

This issue will cover four products which are currently available from Cummins New Parts for your customers. The features and benefits of the following products are presented: Cummins C Brake, Premium Blue Oil, Cummins ADC Fan Clutches, and Cummins Dayco Belts and Hoses. These are all good items to keep in mind when you are looking for associated sales. Knowing the benefits these products will provide your customers can give you the edge on selling them on Genuine Cummins Parts.

Thanks to all of you who responded to the survey included with Parts Professional #9. Many of your suggestions are being incorporated into the program. Some of you commented that you wanted to see new issues more often. You can now expect to see a new one about every two months. Now that we have a better understanding of who our readers are, the subjects covered in the issues will be aimed at meeting the information needs you have. Keep in touch so we can make this your best source for Genuine Cummins Parts information.

At the front of this booklet, there is a reply card and an enrollment form. Please take the time to fill out the reply card and drop it in the mail. This will keep the mailing list current and give us some feedback on how we are doing at keeping our team of Parts Professionals informed. If you know someone that is not on the program that should be, use the enrollment card to sign them up.

If you are missing any of the past booklets, contact your Cummins Distributor. All past issues (#1-#10) are now available through them. Keep in mind, however, that the incentives offered in them are no longer available. They are kept in print for your use as training and reference materials.

The answers for the quiz in this issue will be included in Parts Professional #12. The answers to the quiz in Parts Professional #10 are included with the quiz in this issue.

Thanks to the Parts Product Management team for their help with this issue.

Good luck and good selling!



Kristin Bridges
Editor

Product Professional

Many of you indicated interest in the Product Professional Program in responding to the survey in Parts Professional #9. The Product Professional Program is geared towards Engine Sales and provides the same type of product feature and benefit information on engines that Parts Professional provides on parts. If you think this information would be helpful in your work activities, contact your Cummins Distributor or call 1-800-Diesels to sign up.

Corrections to Parts Professional # 10

AN ERROR HAS BEEN FOUND IN BULLETIN #3624176. This is the "Cylinder Repair" card that was enclosed in Parts Professional #10. The cylinder repair part numbers listed for CPL 322 are **INCORRECT**. These part numbers should read, starting with the Current Production piston, (3051553) 3801766 3801764 3801765 3803211.

All who have received copies of this card should have received a corrected version. **PLEASE DESTROY** any copies of the old version you may have. You will be able to distinguish new versions from the old one by the date 4/89 which is printed in large type in the upper left-hand corner on the new one. Versions shipped after 4/5/89 are **correct**.

TIPS

from the Professionals

Thanks to Travis W. Lawrence for the Tip we received from him in response to our last issue. Sorry for any confusion about the due date. We will always accept Tips, but only those received by the due date can be printed in the following issue.

Travis is our first Big Tipper. He will receive his own personalized jacket with the Parts Professional patch on it as well as five Parts Professional patches for his uniforms and a Parts Professional cap. Send me your Tips! If yours is selected as the best, you will get a jacket too! In addition, anyone with a Tip that gets printed will receive the Parts Professional cap and patches. Send in your suggestions now for your chance to win and to see your name in print!

Here is Travis' Tip:

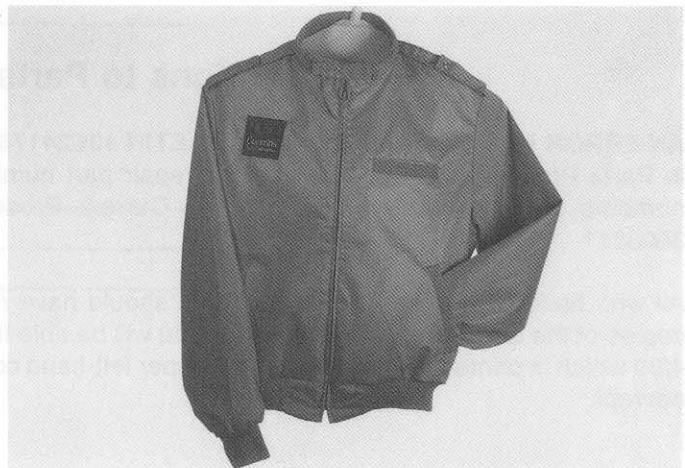
When working on ideas for your display, keep your customer in mind. I like to display overhaul parts. For example, take a Premium Plus cylinder kit and break it down showing the piston, liner, rings, etc. I also include main and rod bearings and as many related overhaul parts as I can get into my display cabinet without overdoing it. It also helps to have related literature in customer view, so when a customer asks me about overhaul parts, I show him the display and he can see what he's getting for his money.

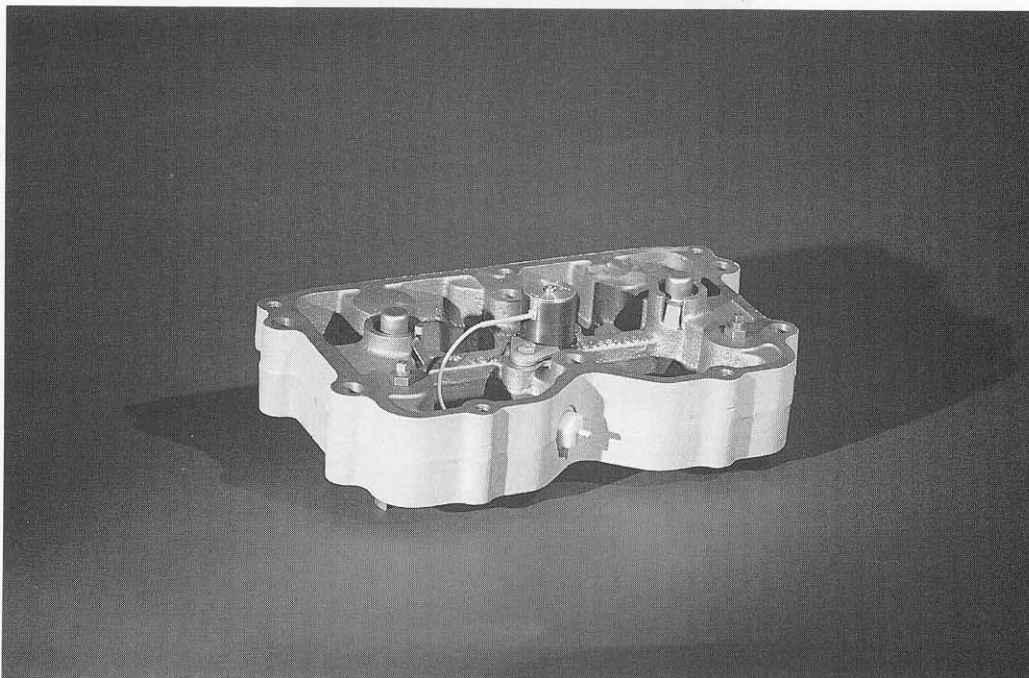
Travis W. Lawrence
Cummins Alabama, Inc.
Montgomery, AL

Rules: The tips must be compatible with Cummins standard practices. They must relate to the sale of New or ReCon Genuine Cummins Parts or Premium Blue Oil. Tips for the next publication (Parts Professional #12) must be received in writing on or before **June 9, 1989**. Tips will be accepted after this date, but may not appear in issue #12.

Send your tips to:

Kristin G. Bridges
Editor - Parts Professional M/C 40911
Cummins Engine Company, Inc.
Box 3005
Columbus, IN 47202-3005





C Brakes

In the past, trucks were not made to be as fuel efficient as today, so their features gave them built-in retarding capabilities. Today's vehicles, however, are aerodynamically designed to reduce air resistance and fuel consumption. In addition, equipment such as radial tires and clutching fans have been added to help reduce a truck's natural retarding capabilities. These improvements required the development of a device that would aid in slowing a truck in any driving situation while not reducing fuel economy or the life of the engine. One such device is the Cummins C Brake.

The C Brake was first used in the Big Cam IV engines in late 1985. It uses a hydraulic circuit to open the exhaust valves near the end of the compression stroke, allowing the energy of the compressed air to escape from the cylinder head. This converts the engine into a large air compressor which obtains power from the momentum of the vehicle. This power is then diverted to C Brake operation. The actual braking power created varies among engines depending on the turbo boost pressure, engine rpm, com-

pression ratio, and injector timing.

The C Brake is designed to be easy to install and operate. It also has features which add to its life and reliability. Some features increase the life of other parts of the truck as well. For instance, the life of the tires can be extended and the life of the service brakes can even be doubled. The increased braking power it provides on steep grades allows quicker completion of the downhill travel which can reduce your customer's trip time.

The Cummins C Brake is covered by a 1 year/100,000 mile warranty. When installed before or during a N.O.W. Overhaul, the C Brake can be covered through the Cummins Extended Warranty Program. See the Fact Sheet in the back of this issue for more details of the features and benefits the C Brake offers your customers. There is also an updated version of the C Brake Reference Guide to take out and keep with you. It contains a kits cross reference and a C Brake component matrix.



Premium Blue Oil

Cummins Premium Blue Oil was the first to meet the new "CE" Engine Oil Classification. This classification meets both Mack's latest EO-K/2 oil requirements and the Cummins NTC-400 test. In meeting these requirements, Premium Blue offers your customers superior benefits as compared to the oils which meet the CD classification as well as those which meet the CE classification.

Cummins Premium Blue Oil provides superior control of top land carbon deposits on pistons by using stabilizers and other chemical additives to retard the rate of oil breakdown at high temperatures. In tests, only 5% of the piston's top land in an engine using Premium Blue was covered with heavy carbon deposits compared to 10% of top land in an engine using another leading premium CE commercial oil, and 40% in an engine using a low quality CD commercial oil. This is significant since excessive deposits cause increased oil consumption. Premium Blue can mean up to 20% less oil consumption as compared to premium quality commercial oils over the life of an engine.

The stabilizers in Premium Blue also provide superior protection against deterioration. The lead in bearings and bushings are protected against corrosive attack by the slower decomposition of the oil and the resultant formation of acids and other oxidation products. This means longer life to overhaul for your customer's engine.

Premium Blue is a 15W-40 oil with the cold start properties of a 10W oil. This gives improved fluidity so that it can be used down to arctic operating conditions

(-25°C/-13°F). In other words, it remains fluid and pumpable at temperatures below those at which an engine can be started unaided. Your customer's bearings and bushings get better cold starting protection which minimize wear and can extend the life to overhaul of the engine.

Your customer's engine gets improved lubrication from Premium Blue since it maintains the viscosity of a 40 grade oil under conditions of thermal and mechanical stresses like those encountered at the ring to liner interface. The oil film is thin there and temperatures can reach 400° to 500°F while the components are moving rapidly relative to each other. By maintaining high viscosity, Premium Blue ensures an adequate oil film which keeps moving parts separated and prevents metal-to-metal contact and the resulting friction and wear. Once again, this helps extend the life to overhaul of your customer's engine.

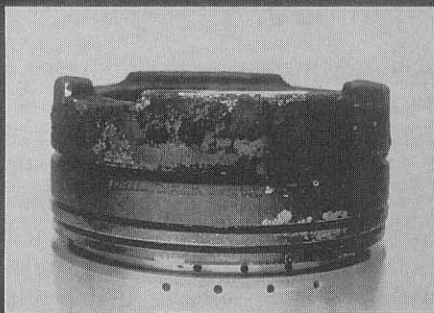
Overall, Premium Blue can give your customers up to 30% more miles between overhauls that are needed because of excessive oil consumption as compared to premium quality commercial oils. Lower oil consumption and more miles between overhauls add up to substantial savings. A cost comparison based on 400,000 miles of operation indicated that a low cost oil which runs fewer miles to overhaul can actually be the highest component of maintenance costs because of the additional overhauls required in that time. In tests, the use of a poor quality oil resulted in two overhauls in 400,000 miles, the premium quality oil required one overhaul, while with Premium Blue, the engines were only 3/4 of the way to needing an overhaul at the end of 400,000 miles. The price differences among oils,

while quite visible at the time of purchase, may be much more than offset by the return of more miles of service before overhaul from Premium Blue. The most important benefit of Premium Blue Oil for your customers is the lower total cost involved in maintaining their engines compared to the costs with a lower quality oil.

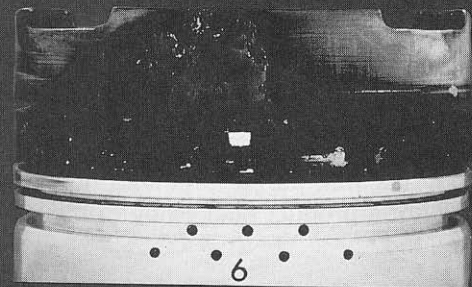
The following photos graphically illustrate the effect

different oils can have on piston top land carbon deposits. Note the variation in the level of piston deposits between the poor quality commercial CD oils, the premium quality CD oils, and the Premium Blue oil. These are the differences that add up to 20% lower oil consumption with Premium Blue as compared to the premium quality commercial oils over the life of an engine.

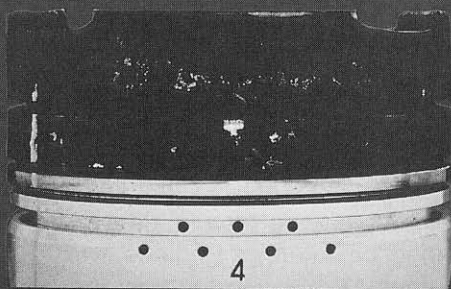
TOP LAND PISTON DEPOSIT



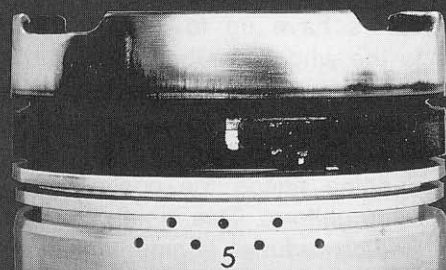
**1980-1982 Premium Quality Commercial CD Oils
10% Top land piston deposits**

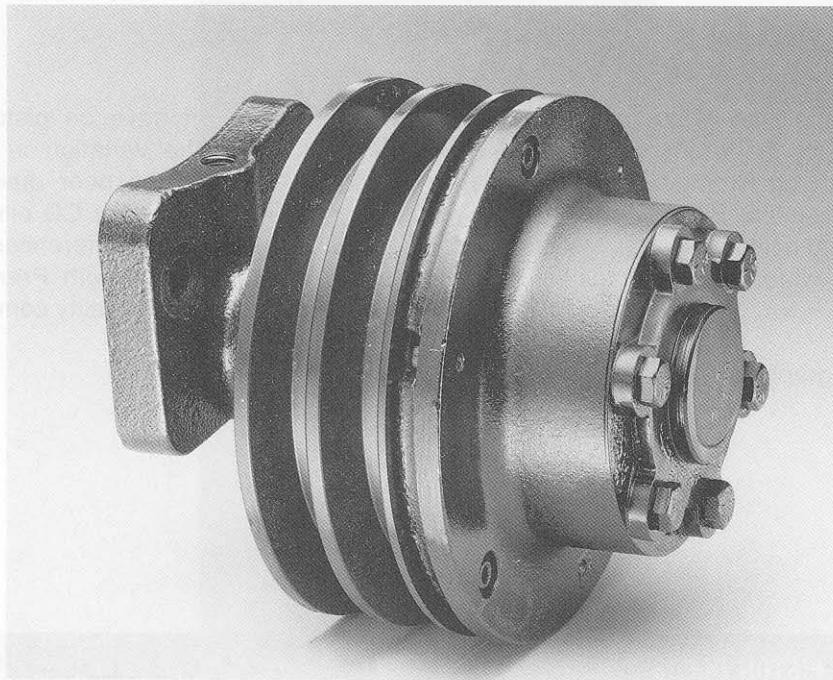


**1980-1982 Poor Quality Commercial CD Oils
40% Top land piston deposits**



**Premium Blue
5% Top land piston deposits**





Cummins ADC Fan Clutch

Cummins now offers the Cummins ADC fan clutch, a heavy-duty electromagnetic on/off fan clutch for Cummins Engines. It provides your customers with all the benefits of on/off operation and electromagnetic technology, as well as the premium quality and dependability of a product backed by Cummins Engine Company, Inc.

The on/off feature of this fan clutch lets your customers take advantage of the fact that during typical truck operation, the engine needs the fan on only 5% of the time. The fan clutch turns the fan off for that 95% of the operating time that the fan is not needed. Due to this feature, your customers can realize up to 15% better fuel economy than with a fixed fan drive and up to 5% better than with a viscous fan drive. These fuel savings mean that the Cummins ADC fan clutch will pay for itself in a few months of operation.

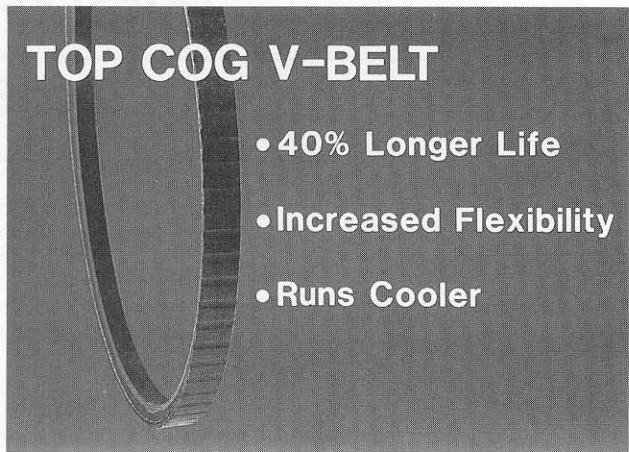
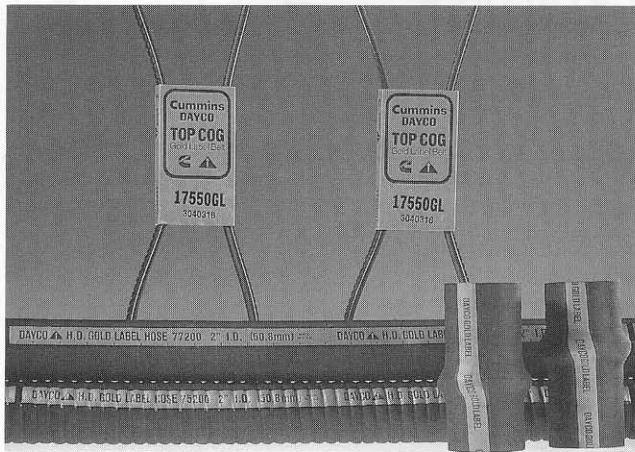
When the fan is off, all the power normally used to drive the fan is available to the wheels. This means your customers have up to 40 more horsepower available to the wheels for better driveability. Also, with the fan off most of the time, noise is reduced. This improves driver comfort and helps the vehicle meet noise regulations. Because the fan only runs when the engine needs the cooling, temperature control is more uniform. This results in faster engine warm-ups, which reduces engine wear and exhaust emissions.

The Cummins ADC fan clutch uses electromagnetic technology to operate. When the engine coolant reaches a preset temperature, electric current is allowed to flow through the coil in the magnet body.

This flow of current magnetically attracts the armature to the inner body and brings the fan up to full hub speed. When the engine coolant has cooled sufficiently, the electric current is stopped and springs pull the armature away from the inner body, allowing the fan to coast to an idle or off condition.

The electromagnetic technology used in this fan clutch means your customer will have trouble free operation. There are no air lines, oil lines, or "O" rings. There is nothing to leak and nothing to maintain. In fact, no preventative maintenance is needed for at least five years. Electromagnetic operation also means it is easy to install. Just bolt it on and plug it in. The wiring harness even has coded connections to prevent improper hook-up. In addition, all connections are weather-sealed to assure long, trouble-free service.

Technological advantages are not the only things your customers are interested in, however. The Cummins ADC fan clutch offers the ultimate advantage: the quality your customers expect from Cummins. It is produced with the premium quality materials and workmanship expected from a wholly owned subsidiary of Cummins, the Advanced Drivetrain Corporation (ADC). Customers are assured of the dependable performance of a product specifically designed for Cummins Engines. In addition, it is, and will be compatible with existing and future electronic engine controls on Cummins engines. With the Cummins ADC name also comes a warranty: 5 year/500,000 mile full coverage for the fan clutch and 1 year/100,000 miles for the temperature sensor and wiring harness.



TOP COG V-BELT

- 40% Longer Life
- Increased Flexibility
- Runs Cooler

Cummins Dayco Belts and Hoses

Cummins offers your customers a complete line of belts and hoses from Dayco. Cummins Dayco belts come in Top Cog, Poly Cog, and V-belt designs.

The Cummins Dayco Top Cog Belts use a unique ribbed design on the top side of the belt to allow for greater flexibility in movement around pulleys. The design also reduces internal friction which prevents damaging heat build up and enables Top Cog belts to run cooler and last up to 40% longer. In addition, they can absorb greater shock loads. Polyester cords in the belts provide maximum stretch resistance to further increase life. Cummins Dayco Cog Belts® with top cogs maintain a constant grip on pulleys, minimizing slip and transmitting maximum power even on small pulley sizes. The belt's extreme flexibility contributes to its long life.

Poly Cog Belts from Cummins Dayco have the same multiple-rib construction as a poly rib belt, but transverse grooves have been added which give the grooves the appearance of having cogs. This design improves flexibility since it reduces the stress of bending around pulleys or making backward arcs around tensioners or idlers. The reduced stress means less heat build up within the belt resulting in cooler operating temperatures. The grooved surface allows the Poly Cog belt to conform more precisely to the curved surface of the pulley, which allows greater torque capacity. These advantages give your cus-

tomers an average belt life expectancy that is 50% greater than that of conventional V-ribbed belts.

In addition to belts, Cummins Dayco offers your customer a full line of hoses for his equipment, including:

- Straight Radiator Hose
- Silicone Radiator Hose
- Heavy Duty Air Vent Hose
- Quick-fit Hose
- Hump Hose
- Heavy Duty Heater Hose
- Silicone Heater Hose
- Air Intake Elbows
- Air Intake Hump Hose
- Reducer Sleeve Inserts

This complete line of quality belts and hoses from Cummins Dayco gives you a great opportunity to serve the maintenance needs of your customers.

Besides the counter sales opportunities, you can sell Cummins Gold Label Belts and Hoses to customers interested in NOW Overhauls. The belts must be Cummins Dayco Gold Label Top Cog or Poly Cog belts with the gold band, the blue label, and a Cummins Part Number. The hoses must have a Cummins Part Number as well. If they meet these guidelines, they can be covered as an option under any of the NOW Plans (1-5).

LATEST PARTS CATALOGS

Application	Bulletin Number
<u>Revised</u>	
88NT Automotive STC	3884212-02
LTA10 Bus	3822121-01
<u>New</u>	
KTTA50 Generator Drive	3884281-00
K2000 Construction	3884205-00
KTA50 G3, G4 Single Stage	3884280-00
6AT3.4 Automotive	3884259-00
6A3.4 Construction (low speed)	3884284-00
NT, NTA855 Fire Pump	3884268-00
KTTA19 Generator Drive	3884269-00
6BTA5.9 Marine 300B	3884261-00
6A3.4 Construction (high speed)	3884283-00
NT, NTA855 Power Unit	3884263-00
Big Cam IV 424/444	3884288-00
NTA855 Construction STC	3884282-00
<u>Customized</u>	
6AT3.4 UPS	3884287-00

Cummins Parts Professional

#2 Associated Parts

Fact Sheet

4/89

Product	Feature	Advantage	Benefit
C BRAKE	Increased braking power on steep grades	Allows quicker completion of downhill travel	Reduced trip time
	Can be used to help slow vehicle when stopping or decelerating on flat roads	Less tire lockup Extends Service Brake life	Extended tire life Significant savings on Service Brake maintenance Improved vehicle control
	Teflon coated wire on Solenoid valve	Less tire hop	Increased life and reliability
	Three position on/off switch with name plates	Increases oil and heat resistance	Easy for drivers to learn to operate
	Fuel pump switch and clutch switch are sealed	Becomes operational with the flip of a switch	Increased life
	Harness, fuel pump switch, and fuel pump throttle designed to plug into the standard Weather Pack Connectors mounted below the fuel pump	Resists contamination such as salt spray and dirt Makes installation easier	Reduced installation time and cost
PREMIUM BLUE OIL	Stabilizers and other chemical additives	Retards rate of oil breakdown at high temperatures	Improved control of top land carbon deposits on pistons and decreased oil consumption
		Protects bearings and bushings against corrosive attack by the formation of acids and other oxidation products	Increased life to overhaul
	Cold start properties	Provides better cold start protection for bearings and bushings	Reduced wear and increased life to overhaul
	Maintains viscosity of a 40 grade oil under thermal and mechanical stress	Ensures an adequate oil film to prevent metal-to-metal contact	Increased life to overhaul
	All above features combined	Up to 30% more miles between overhauls due to excessive oil consumption as compared to premium quality commercial oils	Lower total cost of maintenance

Product	Feature	Advantage	Benefit
CUMMINS ADC FAN CLUTCH	On/off feature	Turns the fan off for 95% of the time that the fan is not needed	Up to 15% better fuel economy than with a fixed fan drive and up to 5% better than with a viscous fan drive
		Up to 40 more horsepower available to the wheels when the fan is off	Improved driveability
	Electromagnetic technology	No air lines, oil lines, or "O" rings	No preventative maintenance required for at least 5 years
	Coded connections	Easy to install	Reduced installation time and cost
CUMMINS DAYCO TOP COG BELTS	Ribbed design on the top side of the belt	Greater flexibility in movement around the pulleys	Increased belt life by up to 40%
	Polyester cords in the belts	Provides maximum stretch resistance	Increased belt life
CUMMINS DAYCO POLY COG BELTS	Transverse grooves	Reduces the stress of bending around pulleys or making backward arcs around tensioners or idlers	Reduced heat build up, cooler operating temperatures, and longer belt life
		Conforms more precisely to the curved surface of the pulley	Increased torque capacity
			Increased belt life by up to 50% over conventional V-ribbed belts

Cummins ADC Fan Clutch Product Line

Part Number	Engines	Mount	Pulley Diameter	OEM Applications	Notes
3862491	NT	High	7"	Navistar, Autocar, Freightliner, Kenworth, Mack, and Peterbilt applications.	Standard NT fan clutch with 7" diameter pulley
3862628	NT	High	8.2"	Navistar, Autocar, Freightliner, Kenworth, Mack, and Peterbilt applications	Standard NT fan clutch with 8.2" diameter pulley
3862583	NT	Low	7"	T600 and T800 Kenworths with a BCIII or BCIV	11" drop from mounting bolts to pulley center
3862585	NT	Low	7"	All Peterbilt Conventionals up to 1988	5.25" drop from mounting bolts to pulley center
3862587	NT	Low	7"	Primarily 1988 Freightliners with BCIV	6.5" drop from mounting bolts to pulley center
3862645	L10	Std.	6" (152mm)	All on-highway L10 applications	1:1 drive ratio with 6" (152mm) crank pulley and a 1.25:1 drive ratio with a 7.5" (190mm) crank pulley

Test Your Professional Knowledge

(Answers will appear in Parts Professional #12)

1. The Cummins C Brake can be covered through the Cummins extended warranty plan when installed before or during a N.O.W. Overhaul.
 - A. True
 - B. False
2. At temperatures below those at which an engine can be started unaided ($-25^{\circ}\text{C}/-13^{\circ}\text{F}$), Premium Blue Oil
 - A. freezes solid.
 - B. becomes more fluid than it is at high temperatures.
 - C. breaks down.
 - D. remains fluid and pumpable.
 - E. none of the above.
3. The design of Cummins Dayco Poly Cog Belts
 - A. improves flexibility.
 - B. increases heat build up.
 - C. allows greater torque capacity.
 - D. both A and C.
 - E. none of the above.
4. The slower decomposition of Premium Blue Oil protects the _____ from corrosive attack.
 - A. tires
 - B. aluminum in the pistons
 - C. rubber in the hoses
 - D. lead in the bearings and bushings
 - E. driver
5. The Cummins ADC fan clutch requires
 - A. no preventative maintenance ever.
 - B. no preventative maintenance for at least 5 years.
 - C. 3 oil lines.
 - D. 2 air lines.
 - E. both C and D.
6. The design of Cummins Dayco Cog Belts® with top cogs allows them to
 - A. maintain a constant grip on pulleys.
 - B. minimize slip.
 - C. transmit maximum power.
 - D. all of the above.
 - E. none of the above.
7. Premium Blue Oil gives your customers a lower total cost of maintaining his engine compared to the costs with a lower quality oil.
 - A. True
 - B. False

8. During typical truck operation, the engine needs the fan
- A. all of the time.
 - B. never.
 - C. 5% of the time.
 - D. 95% of the time.
 - E. 50% of the time.
9. Using a hydraulic circuit, the C Brake opens the exhaust valves
- A. at the end of the power stroke.
 - B. right after Top Dead Center (TDC).
 - C. near the end of the compression stroke.
 - D. never, it only opens the intake valves.
 - E. none of the above.
10. The Cummins ADC fan clutch operates with
- A. electromagnetic technology.
 - B. viscous technology.
 - C. microchip technology.
 - D. space age technology.
 - E. none of the above.
11. Cummins Premium Blue is the only oil to meet the new "CE" Engine Oil Classification.
- A. True
 - B. False
12. Due to their ribbed design on the top side of the belt, Cummins Dayco Top Cog Belts run cooler
- A. and last up to 40% longer.
 - B. and are therefore less flexible.
 - C. and last up to 5% longer.
 - D. and last up to 100% longer.
 - E. none of the above.
13. The Cummins C Brake does not reduce fuel economy or the life of the engine.
- A. True
 - B. False
14. Premium Blue gives your customers
- A. improved control of carbon deposits on pistons.
 - B. reduced oil consumption.
 - C. increased life to overhaul.
 - D. reduced engine wear.
 - E. all of the above.
15. The Cummins ADC fan clutch gives your customers up to 100 more horsepower available to the wheels when the fan is off.
- A. True
 - B. False

16. Excessive carbon deposits on the top land of pistons
- A. can be minimized by using Premium Blue oil.
 - B. is a problem no oil can help with.
 - C. can cause increased oil consumption.
 - D. both A and C.
 - E. none of the above.
17. Cummins Dayco Gold Label Belts and Hoses can be covered as an option under any of the N.O.W. Plans (1-5).
- A. True
 - B. False
18. The C Brake can
- A. double the life of service brakes.
 - B. extend the life of the tires.
 - C. not reduce trip time.
 - D. both A and B.
 - E. all of the above.
19. Cummins Dayco Top Cog Belts can absorb greater shock loads.
- A. True
 - B. False
20. Cummins Premium Blue Oil can decrease oil consumption over the life of the engine by up to
- A. 75%
 - B. 2%
 - C. 20%
 - D. 100%
 - E. none of the above.

Answers to Parts Professional #10

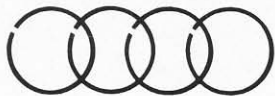
1. D
2. A
3. B
4. C
5. D

6. A
7. B
8. B
9. A
10. A

11. D
12. A
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14. A
15. A

16. A
17. D
18. A
19. A
20. B

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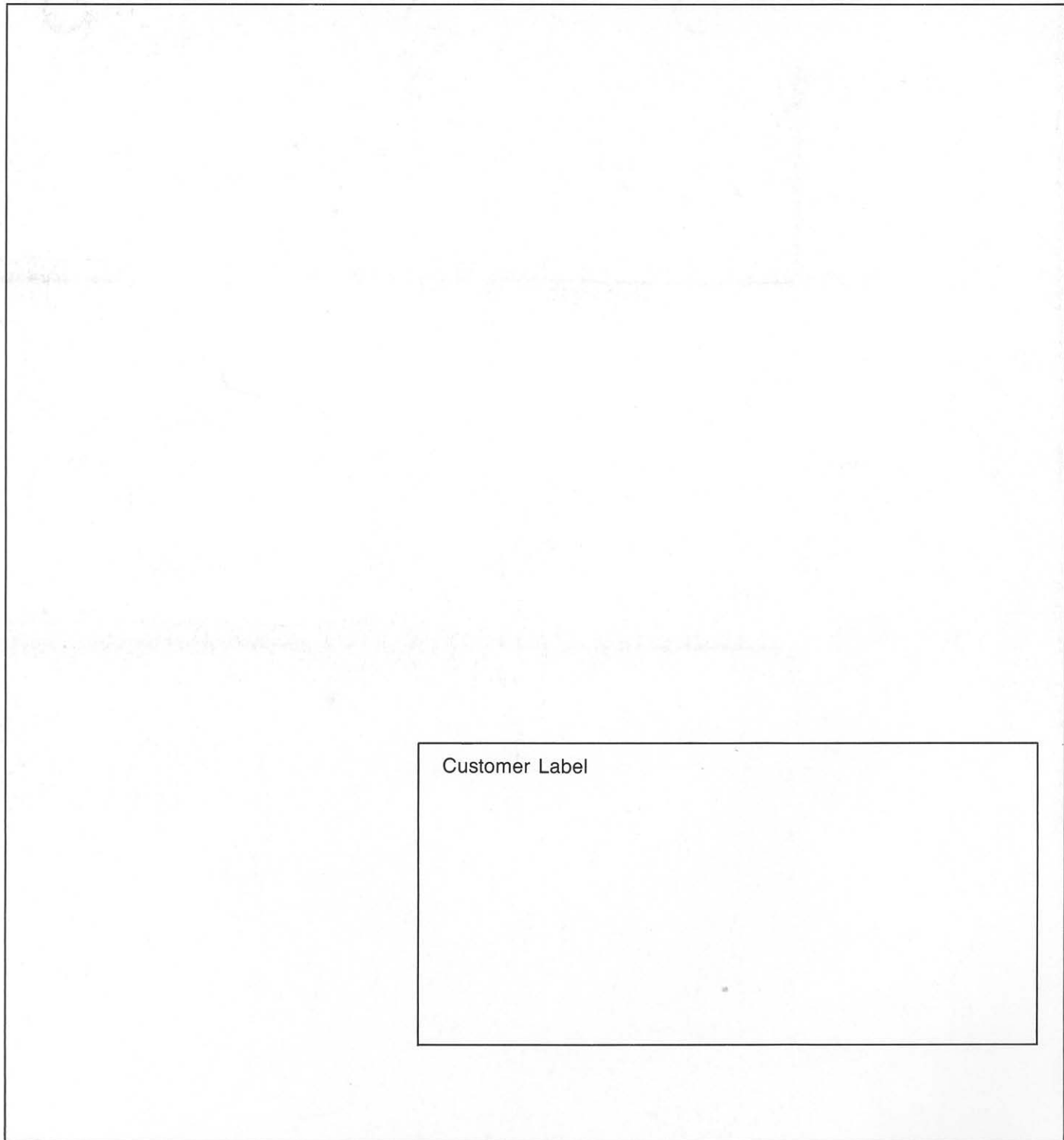


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