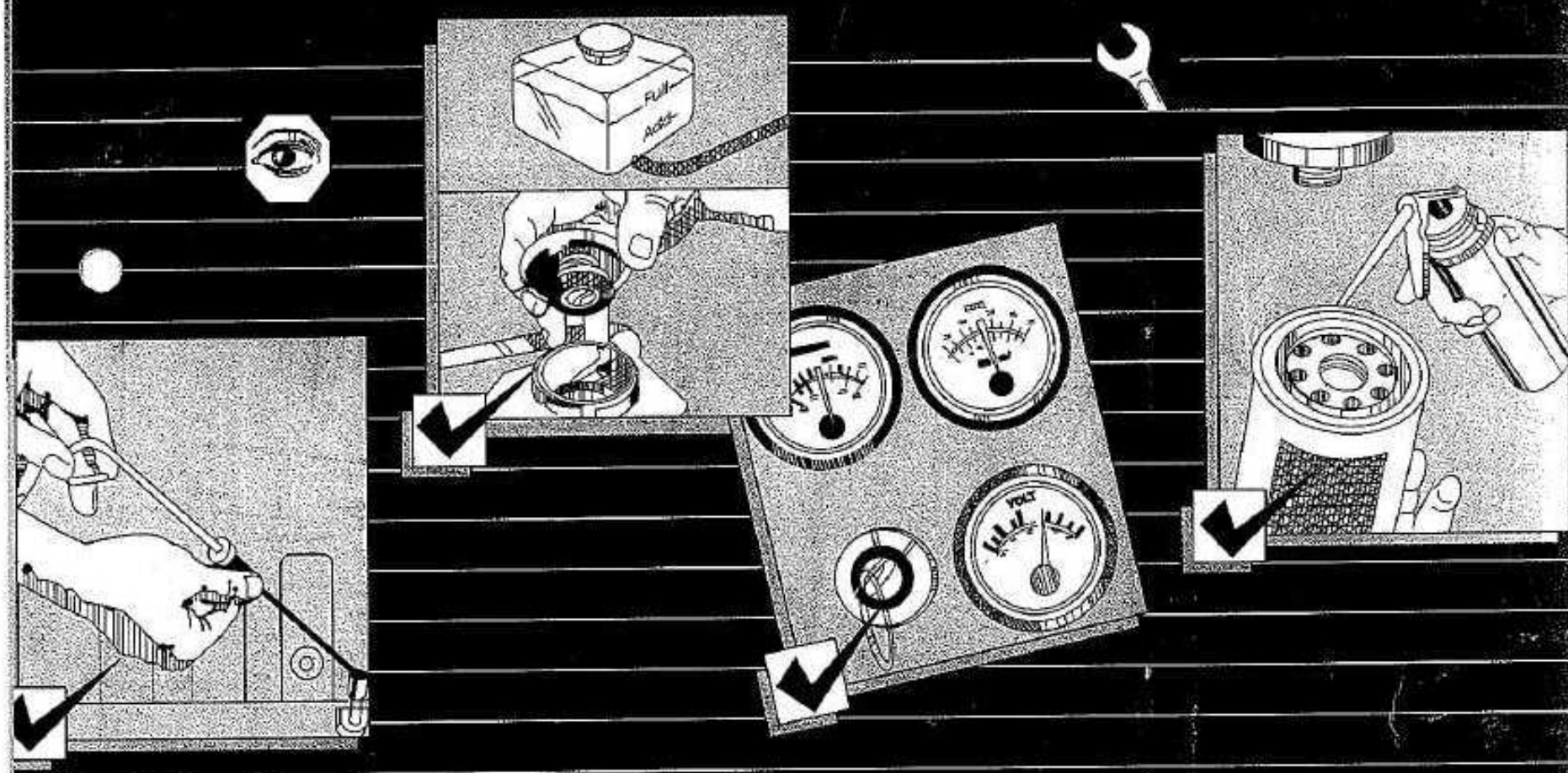
Operation and Maintenance Manual NT/NTA855 Big Cam III

Worldwide Construction/Industrial and G (Generator)-Drive Engines



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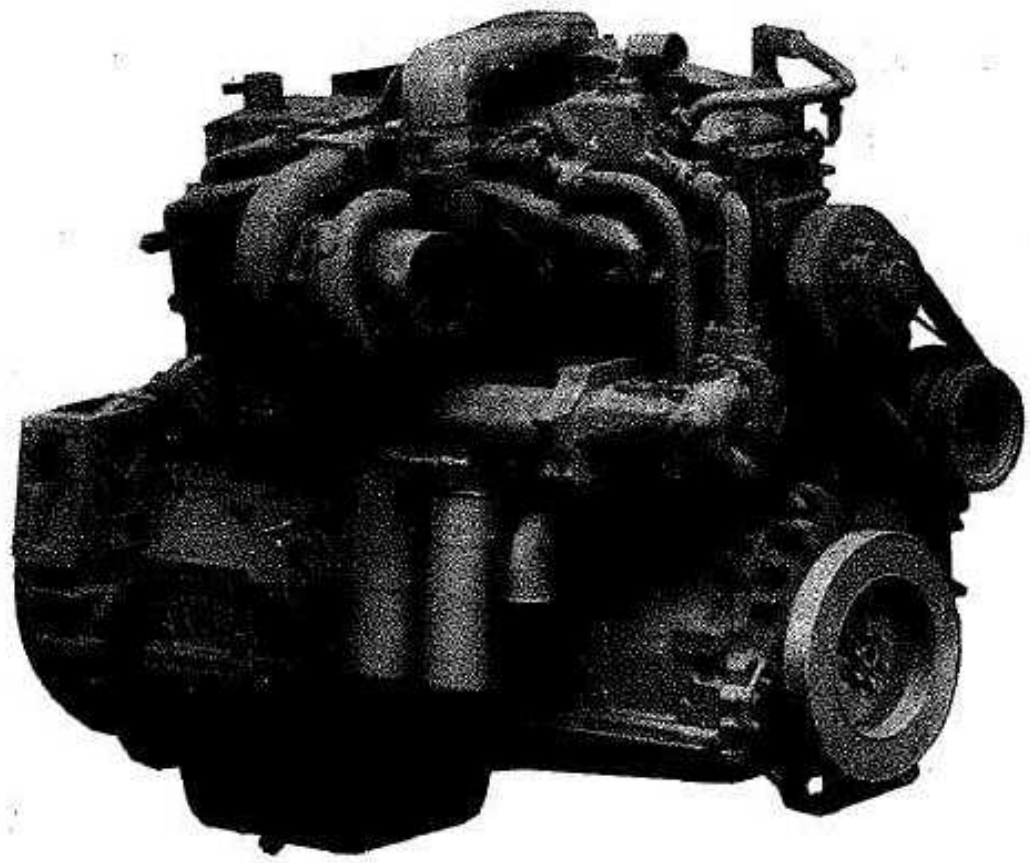

Big Can III

Bulletin No. 3666002-02
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Foreword

This manual contains information for the correct operation and maintenance of your Cummins engine. It also includes important safety information, engine and systems specifications, troubleshooting guidelines, and listings of Cummins Authorized Repair Locations and component manufacturers.

Keep this manual with the equipment. If the equipment is traded or sold, give the manual to the new owner.

The information, specifications, and recommended maintenance guidelines in this manual are based on information in effect at the time of printing. Cummins Engine Company, Inc. reserves the right to make changes at any time without obligation. If you find differences between your engine and the information in this manual, contact your local Cummins Authorized Repair Location.

The latest technology and the highest quality components were used to produce this engine. When replacement parts are needed, we recommend using only genuine Cummins or ReCon® exchange parts. These parts can be identified by the following trademarks :

Note : Warranty information is located in Section W. Make sure you are familiar with the warranty of warranties applicable to your engine.

Table of Contents

Important Reference Numbers

Fill in the part name and number in the blank spaces provided below. This will give you a reference whenever service or maintenance is required.

Engine Model _____

Engine Serial Number _____

Engine Control Parts List Number _____

Fuel Pump Code _____

Filter Part Numbers:

- Air Cleaner Element _____
- Oil (Full-Flow) _____
- Oil (Bypass) _____
- Fuel _____
- Coolant _____

Belt Part Numbers _____

_____

_____

_____

_____

Section i - Introduction

Section Contents

To the Owner and Operator

Preventative maintenance is the easiest and least expensive type of maintenance. Follow the maintenance schedule recommendations outlined in Maintenance Guidelines (Section 2).

Keep records of regularly scheduled maintenance.

Use the correct fuel, oil, and coolant in your engine as specified in Engine Specifications, Section V.

Cummins uses the latest technology and the highest quality components to produce its engines. Cummins recommends using only genuine Cummins parts and ReCon® exchange parts.

Personnel at Cummins Authorized Repair Locations have been trained to provide expert service and parts support. If you have a problem that can **not** be resolved by a Cummins Authorized Repair Location, follow the steps outlined in Service Assistance (Section S).

About the Manual

This manual contains information needed to correctly operate and maintain your engine as recommended by Cummins Engine Company, Inc. Additional service literature can be ordered from your Cummins distributor. For problems with literature orders, contact 1-800-DIESELS (1-800-343-7357) (for U.S.A. and Canada).

This manual does **not** cover vehicle or equipment maintenance procedures. Consult the vehicle or equipment manufacturer for specific maintenance recommendations.

Both metric and U.S. customary values are listed in this manual. The metric value is listed first, followed by the U.S. customary in brackets.

Numerous illustrations and symbols are used to aid in understanding the meaning of the text. Refer to page i-3 for a complete listing of symbols and their definitions.

Each section is preceded by a "Section Contents" to aid in locating information.

How to Use the Manual

This manual is organized according to intervals at which maintenance on your engine is to be performed. A table that states the required intervals and the checks to be made is located in Section 2. Locate the interval at which you are performing maintenance. Then follow the steps given in that section for all the procedures to be performed. In addition, all of the procedures done under previous maintenance intervals **must** be performed.

Keep a record of all the checks and inspections made. A record form for recording date, mileage/kilometer or hours, and what maintenance checks were performed is located in Section 2.

Refer to Section T for a guide to troubleshoot your engine. Follow the directions given on page T-2 to locate and correct engine problems.

Refer to Section V for specifications recommended by Cummins Engine Company, Inc., for your engine. Specifications and torque values for each engine system are given in that section.

Symbols

The following symbols have been used in this manual to help communicate the intent of the instructions. When one of the symbols appears, it conveys the meaning defined below:

WARNING - Serious personal injury or extensive property damage can result if the warning instructions are **not** followed.

CAUTION - Minor personal injury can result or a part, an assembly, or the engine can be damaged if the caution instructions are **not** followed.

Indicates a **REMOVAL or DISASSEMBLY** step.

Indicates an **INSTALLATION or ASSEMBLY** step.

INSPECTION is required.

CLEAN the part or assembly.

PERFORM a mechanical or time **MEASUREMENT.**

LUBRICATE the part or assembly.

Indicates that a **WRENCH or TOOL SIZE** will be given.

TIGHTEN to a specific torque.

PERFORM an electrical **MEASUREMENT.**

Refer to another location in this manual or another publication for additional information.

The component weighs 23 kg [50 lb] or more. To avoid personal injury, use a hoist or get assistance to lift the component.

Simbolos

Los simbolos siguientes son usados en este manual para clarificar el proceso de las instrucciones. Cuando aparece uno de estos simbolos, su significado se especifica en la parte inferior.

ADVERTENCIA - Serios daños personales o daño a la propiedad puede resultar si las instrucciones de Advertencia **no** se consideran.

PRECAUCION - Daños menores pueden resultar, o de piezas del conjunto o el motor puede averiarse si las instrucciones de Precaución **no** se siguen.

Indica un paso de **REMOCION** o **DESMONTAJE.**

Indica un paso de **INSTALACION** o **MONTAJE.**

Se requiere **INSPECCION.**

LIMPIESE la pieza o el montaje.

EJECUTESE una **MEDICION** mecánica o del tiempo.

LUBRIQUESE la pieza o el montaje.

Indica que se dará una **LLAVE DE TUERCAS** o el **TAMAÑO DE HERRAMIENTA.**

APRIETESE hasta un par torsor específico.

EJECUTESE una **MEDICION** eléctrica.

Para información adicional refiérase a otro emplazamiento de este manual o a otra publicación anterior.

El componente pesa 23 kg [50 lb] o mas. Para evitar dano corporal empleen una cabria u obtengan ayuda para elevar el componente.

Definition of Terms

AFC	Air Fuel Control
API	American Petroleum Institute
ASA	Air Signal Attenuator
ASTM	American Society of Testing and Materials
C	Celsius
CARB	California Air Resources Board
C.I.D.	Cubic Inch Displacement
cm	Centimeter
CPL	Control Parts List
c	Centistokes
DCA	Diesel Coolant Additive
E.C.S.	Emission Control System
EPA	Environmental Protection Agency
F	Fahrenheit
ft-lb	Foot Pound
GVW	Gross Vehicle Weight
Hg	Mercury
HP	Horsepower
H_2O	Water
in-lb	Inch Pound
kg	Kilograms
km	Kilometers
k../l	Kilometers per Liter
kPa	Kilopascal
l	Liter
m	Meter
mm	Millimeter
MPa	Megapascal
MPH	Miles Per Hour
MPQ	Miles Per Quart
N•m	Newton-meter
OEM	Original Equipment Manufacturer
ppm	Parts Per Million
psi	Pounds Per Square Inch
RPM	Revolutions Per Minute
S.A.E.	Society of Automotive Engineers

NOTES

Section E - Engine and Component Identification

Section Contents

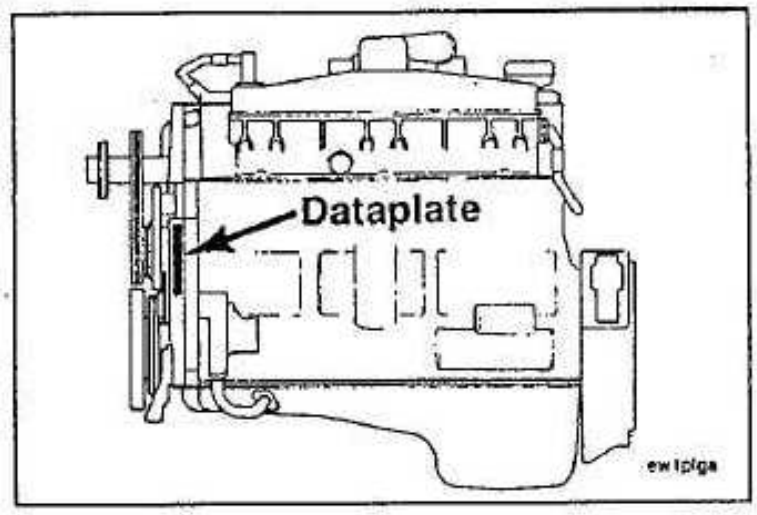
Engine Identification

Cummins Engine Nomenclature

The model name provides the following data:

N T A 855 A

- A = Application (A = Ag; C = Construction)
- 855 = Displacement (CID)
- A = Aftercooled
- T = Turbocharged
- N = Four Valve Head



Engine Dataplate

The engine dataplate shows specific information about your engine. The engine serial number (E.S.N.) (1), Control Parts List (CPL) (2), Model (3), and Horsepower and RPM rating provide information for ordering parts and service needs.

NOTE: The engine dataplate **must not** be changed unless approved by Cummins Engine Company, Inc.

Engine No.		S.O. No.		E.C.S.		VEHICLE EMISSION CONTROL INFORMATION: This engine conforms to U.S. EPA and the CARB regulations applicable to Model Year New Heavy Heavy-Duty Engines. This engine has a primary intended service application as a heavy heavy-duty diesel engine.
Model		Ref. No.		Injection timing code		
Advertised HP at RPM		Engine Cert. Ident. / C.I.D. / Family / CPL		Injector torque Inch-Lbs.		
Cont. No.				Injector travel Inch		Idle Speed RPM
Date of mfg.		Warranty start date		Valve lash cold Int. Exh.		WARNING: ... may result and warranty is voided. ... RPM or altitudes exceed published max. ... values for this model and application.
Manufactured by Cummins Engine Company, Inc., U.S.A. 3045550				Fuel rate at advertised HP mm³ stroke		

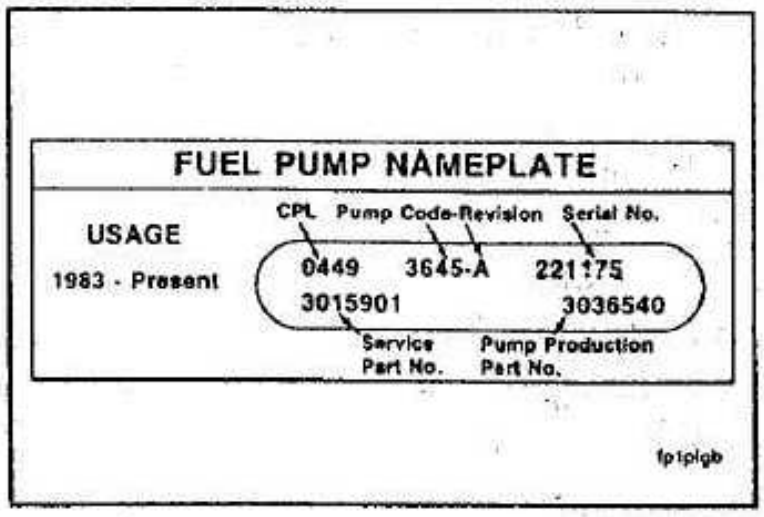
3 1 2

ewlplgb

Engine No.		S.O. No.		E.C.S.		VEHICLE EMISSION CONTROL INFORMATION: This engine conforms to U.S. EPA regulations applicable to Model Year New Heavy Heavy-Duty Engines. This engine has a primary intended service application as a heavy heavy-duty diesel engine.
Model		Ref. No.		Injection timing code		
Advertised HP at RPM		Engine Cert. Ident. / C.I.D. / Family / CPL		Injector torque Inch-Lbs.		
Cont. No.				Injector travel Inch		Idle Speed RPM
Date of mfg.		Warranty start date		Valve lash cold Int. Exh.		WARNING: ... may result and warranty is voided. ... RPM or altitudes exceed published max. ... values for this model and application.
Manufactured by Cummins Engine Company, Inc., U.S.A. 3045551				Fuel rate at advertised HP mm³ stroke		

Fuel Pump Dataplate

The fuel pump dataplate is located on the top of the fuel pump. It provides information for fuel pump calibration.



Section 3 - Daily Maintenance Procedures

Section Contents

General Information

Preventative maintenance begins with day-to-day awareness of the condition of the engine and its systems.

Before starting the engine, check the oil and coolant levels. Look for.

- Leaks
- Loose or damaged parts
- Worn or damaged belts
- Any change in engine appearance

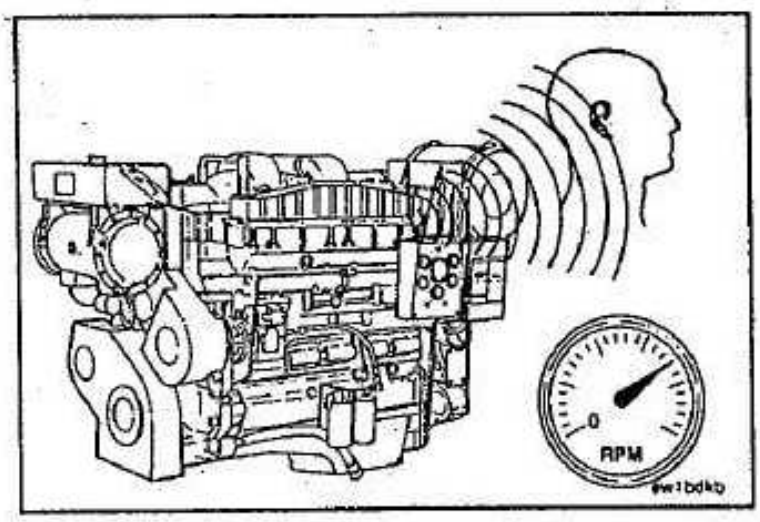
Engine Operation Report

The engine must be maintained in top mechanical condition if the operator is to get optimum satisfaction from its use. The maintenance department needs daily running reports from the operator to make necessary adjust nts in the time allotted and to make provisions for more extensive maintenance work as the reports indicate the necessity.

Comparison and intelligent interpretation of the daily report along with a practical follow-up action will eliminate most failures and emergency repairs.

Report to the maintenance department any of the following conditions:

- Low lubricating oil pressure
- Low power
- Abnormal water or oil temperature
- Unusual engine noise
- Excessive smoke
- Excessive use of coolant, fuel or lubricating oil
- Any fuel, coolant or lubricating oil leaks.



Unusual Engine Noise

Checking

During the daily maintenance check, listen for a un-usual engine noise which can indicate that service is required.

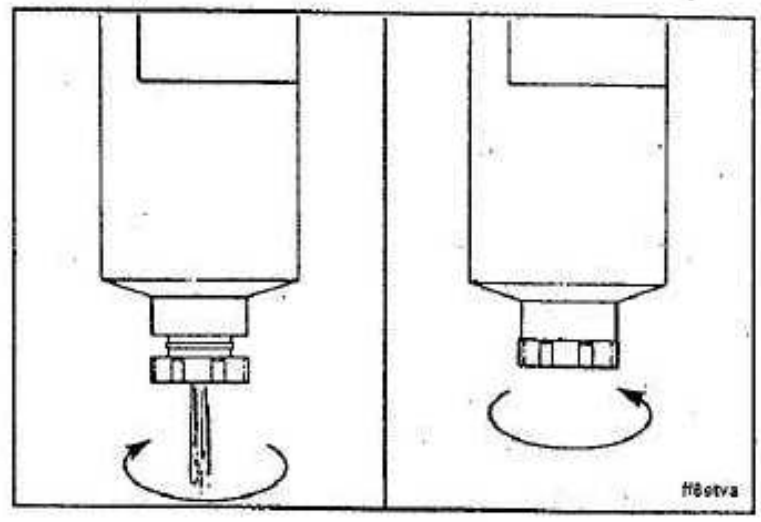
Fuel-Water Separator

Drain

NOTE: The water and sediment may contain petroleum products. Please consult the local environmental agency for recommended disposal guidelines.

Cummins requires that a fuel-water separator or fuel filter and water separator be installed in the fuel supply system. Drain the water and sediment from the separator daily.

Shut off the engine. Use your hand to open the drain valve. Turn the valve **counterclockwise** until draining occurs and the valve drops at least one inch out of the filter. Drain the filter sump of water until clear fuel is visible.



Caution: Do not overtighten the valve. Overtightening can damage the threads.

Turn the valve **clockwise** to close the drain valve.

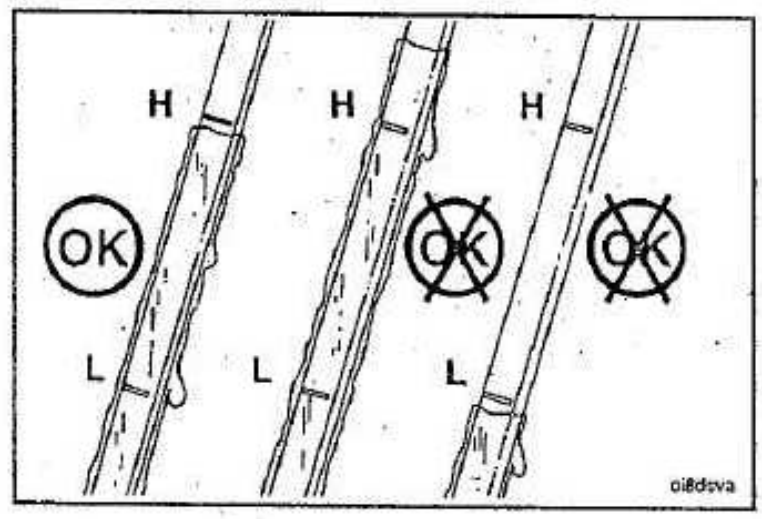
Oil Level

Checking

Check the oil level daily.

Never operate the engine with the oil level below the "L" (Low) mark or above the "H" (High) mark. Wait at least 5 minutes after shutting off the engine to check the oil. This allows time for the oil to drain to the oil pan.

NOTE: The vehicle **must** be level when checking the oil level to make sure the measurement is correct.



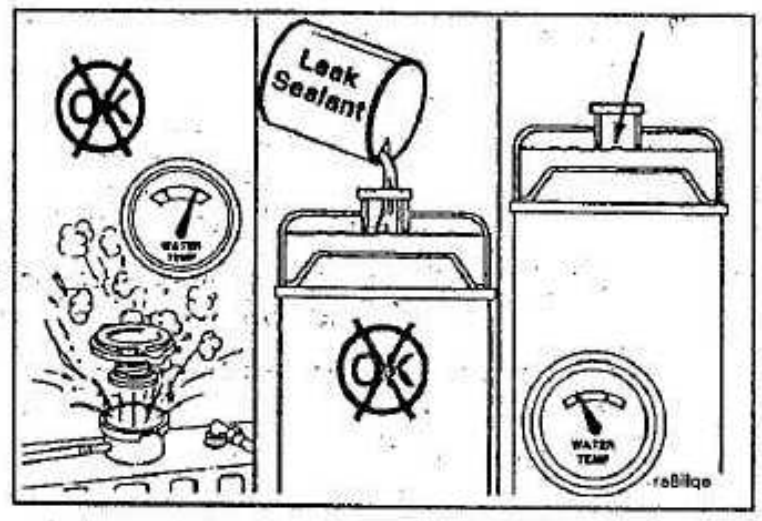
Coolant Level

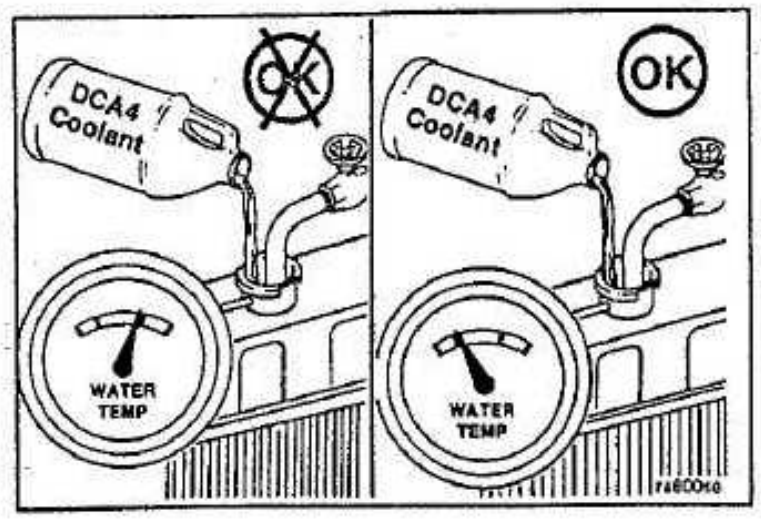
Checking

Warning: Do not remove the radiator cap from a hot engine. Wait until the temperature is below 50°C [120°F] before removing the pressure cap. Failure to do so can result in personal injury from heated coolant spray or steam. Remove the filler cap slowly to relieve coolant system pressure.

Never use a sealing additive to stop leaks in the coolant system. This can result in coolant system plugging and inadequate coolant flow causing the engine to overheat.

The coolant level **must** be checked daily.

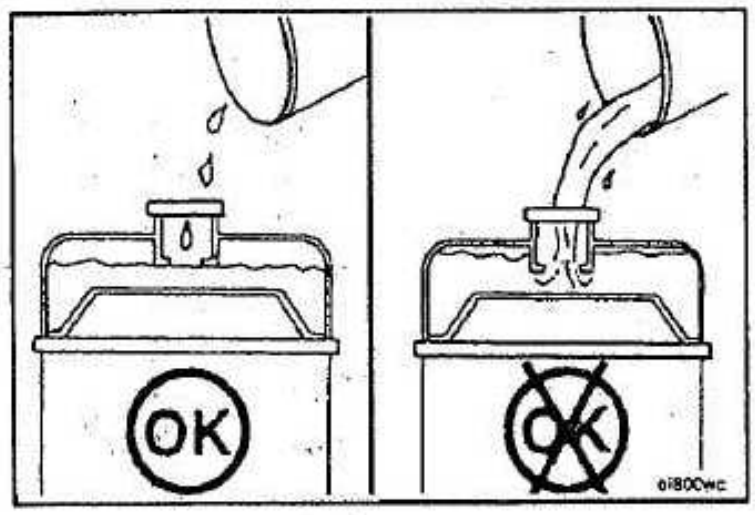




Caution: Do not add cold coolant to a hot engine. Engine castings can be damaged. Allow the engine to cool to below 50°C [120°F] before adding coolant.

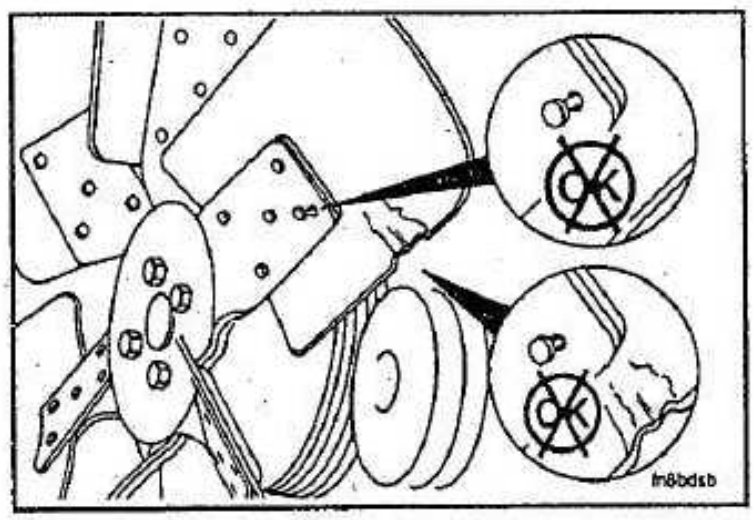
Makeup coolant added to the engine must be mixed with the correct proportions of antifreeze, DCA, and water to avoid engine damage.

Refer to Coolant Recommendations/Specifications in Section V for details on proper mixing of coolant.



Fill the cooling system with coolant to the bottom of the fill neck in the radiator fill or expansion tank.

NOTE: Some radiators have two fill necks, both of which must be filled when the cooling system is drained.



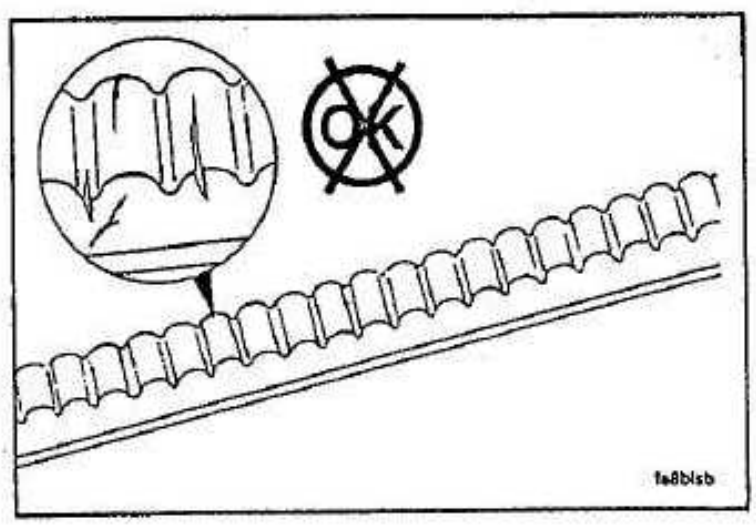
Cooling Fan

Inspection

Warning: Personal injury can result from a fan blade failure. Never pull or pry on the fan. This can damage the fan blade(s) and cause fan failure.

NOTE: Manually rotate the crankshaft by using a wrench on the accessory drive pulley nut.

A visual inspection of the cooling fan is required daily. Check for cracks, loose rivets, bent or loose blades, and for contact between the fan blade tips and the fan shroud. Check the fan to make sure it is securely mounted. Tighten the capscrews if necessary. Replace any fan that is damaged.



Belts

Inspection

Visually inspect the belts daily. Replace the belts that are cracked or frayed. Adjust belts that have a glazed or shiny surface which indicates belt slippage. Correctly installed and tensioned belts will show even pulley and belt wear.

Belt damage can be caused by:

- Incorrect tension
- Incorrect size or length
- Pulley misalignment
- Incorrect installation
- Severe operating environment
- Oil or grease on the belts

Belt Tension

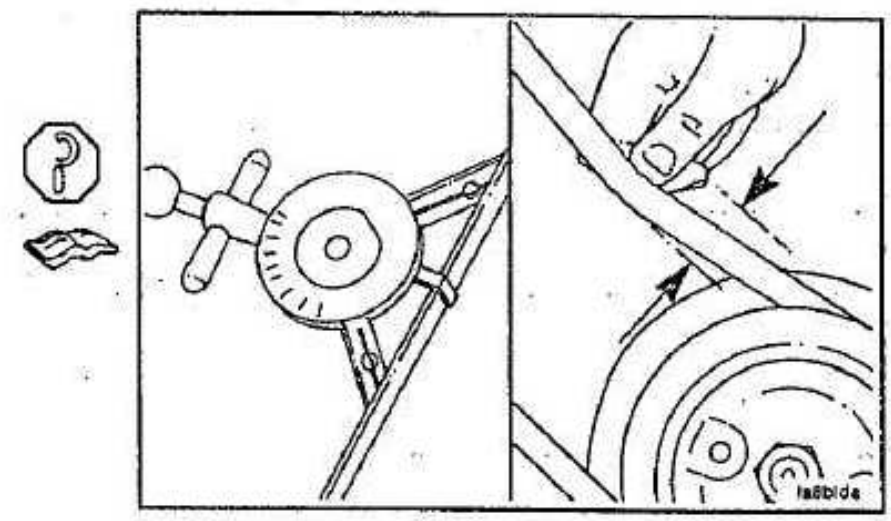
Checking

Measure the belt tension in the center span of the pulleys.

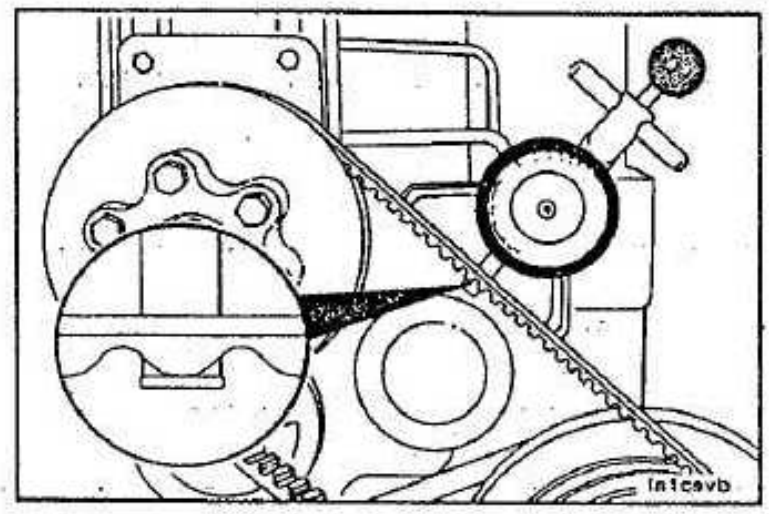
Refer to the Drive Belt Tension Chart, Section V, for the correct gauge and tension value for the belt width used.

An alternate method (deflection method) can be used to check belt tension by applying 110 N [25 lbf] force between the pulleys on v-belts. If the deflection is more than one (1) belt thickness per foot of pulley center distance, the belt tension **must** be adjusted.

Refer to Section A for adjustment procedures.



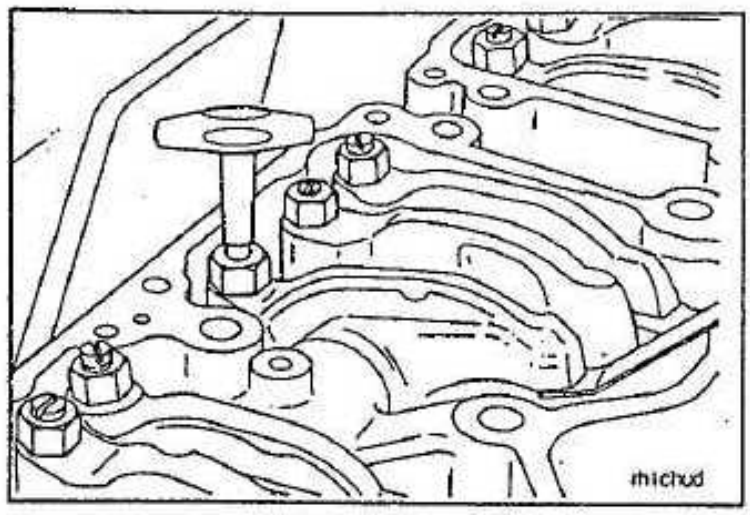
For cogged belts, make sure the belt tension gauge is positioned so that the center tensioning leg is placed directly over the high point (hump) of a cog. Other positioning will result in incorrect measurement.



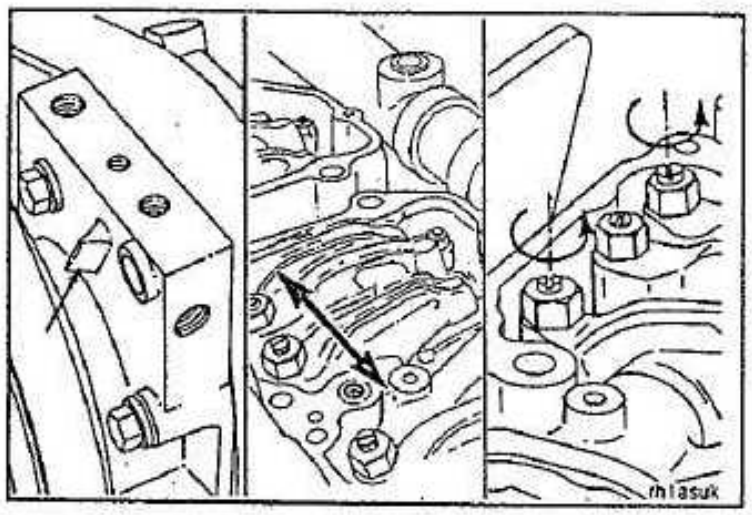
Air Cleaner Pre-Cleaner and Dust Pan

Checking/Cleaning

Under extremely dirty conditions an air pre-cleaner can be used. Clean the pre-cleaner jar and dry-type air cleaner dust pans daily or more often, as necessary, depending on operating conditions.

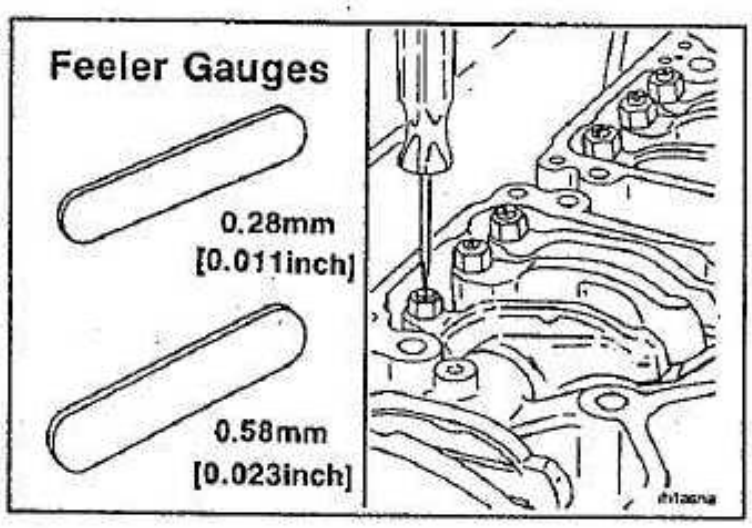


Adjust the intake and the exhaust valves on No. 5 cylinder **before** rotating the accessory drive to the next valve set mark. Refer to "Valve Adjustment Procedure" later in this section.



Valve Adjustment Procedure

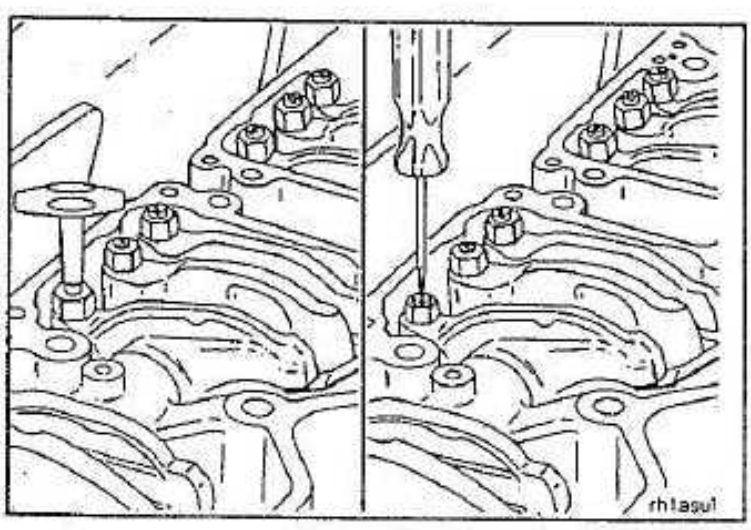
With the "A" valve set mark aligned with the pointer on the gear cover (use bolt-on pointer for NTA-450 and NTTA-450 engines; cast-in pointer otherwise) and both valves closed on cylinder No. 5, loosen the lock nuts on the intake and the exhaust valve adjusting screws.



Select a feeler gauge for the correct valve lash specification.

Valve Lash Specifications	
Intake	**Exhaust**
0.28 mm [0.011-inch]	0.58 mm [0.023-inch]

Insert the feeler gauge between the top of the crosshead and the rocker lever pad.



Two different methods for establishing valve lash clearance are described below. Either method can be used; however, the torque wrench method has proven to be the most consistent. It eliminates the need to feel the drag on the feeler gauge.

- **Torque Wrench Method:** Use the inch pound torque wrench, Part No. 3376592 (normally used to set preload on top stop injectors), and tighten the adjusting screw.

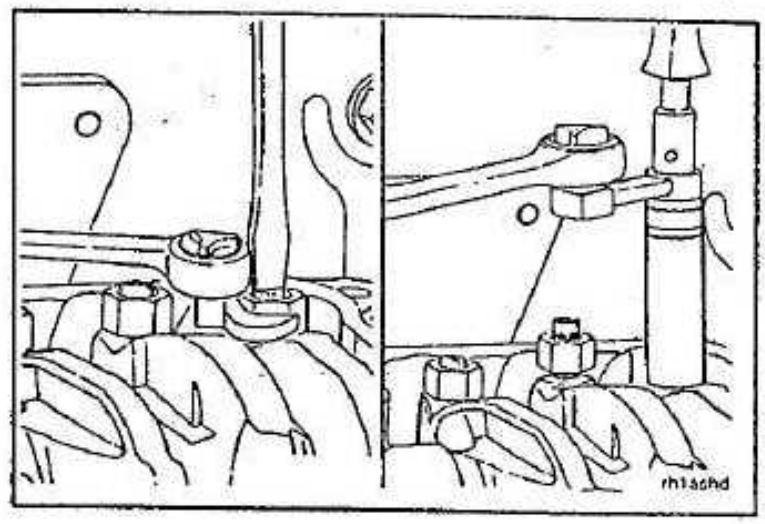
Torque Value: 0.7 N•m [6 in-lb]

- **Feel Method:** Tighten the adjusting screw until a slight drag is felt on the feeler gauge.

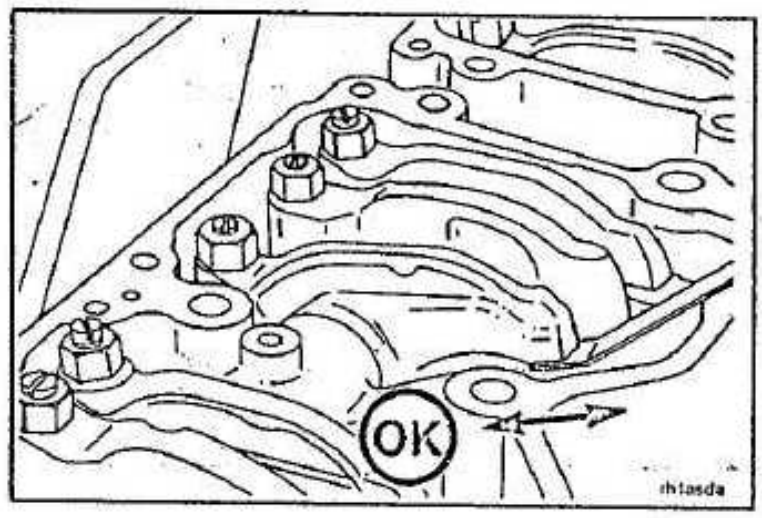
Hold the adjusting screw in this position. The adjusting screw must not turn when the lock nut is tightened.

Torque Values:

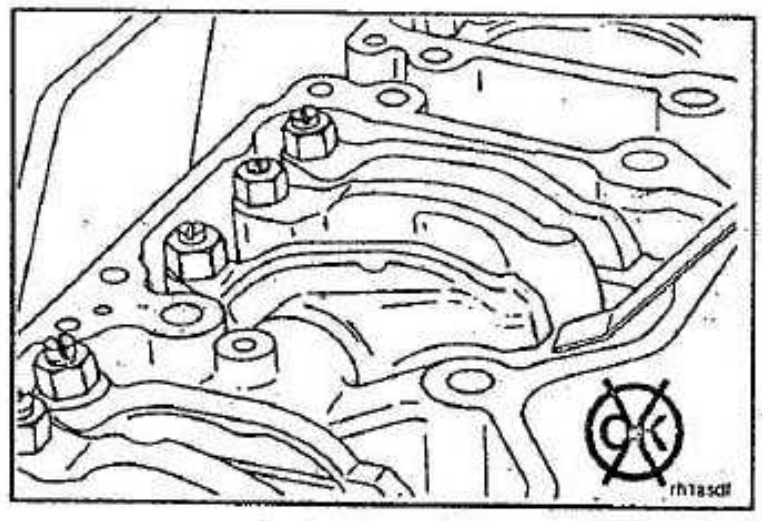
With torque wrench adapter, Part No. ST-669	47 N•m [35 ft-lb]
Without adapter	61 N•m [45 ft-lb]



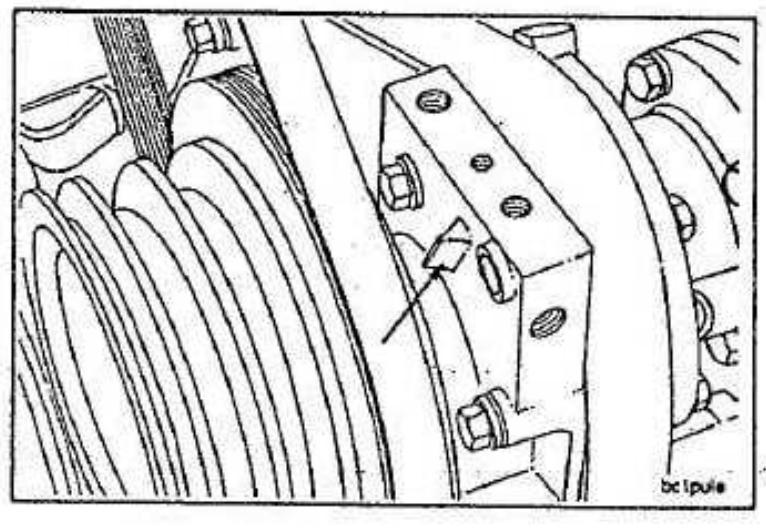
After tightening the lock nut to the correct torque value, check to make sure the feeler gauge will slide backward and forward between the crosshead and the rocker lever with only a slight drag.



If using the feel method, attempt to insert a feeler gauge that is 0.03 mm [0.001-inch] thicker between the crosshead and the rocker lever pad. The valve lash is **not** correct when a thicker feeler gauge will fit.



After adjusting the crossheads and the valves on cylinder No. 5, rotate the accessory drive and align the next valve set mark with the pointer (bolt-on pointer for NTA-450 and NTTA-450 engines; cast-in pointer otherwise).

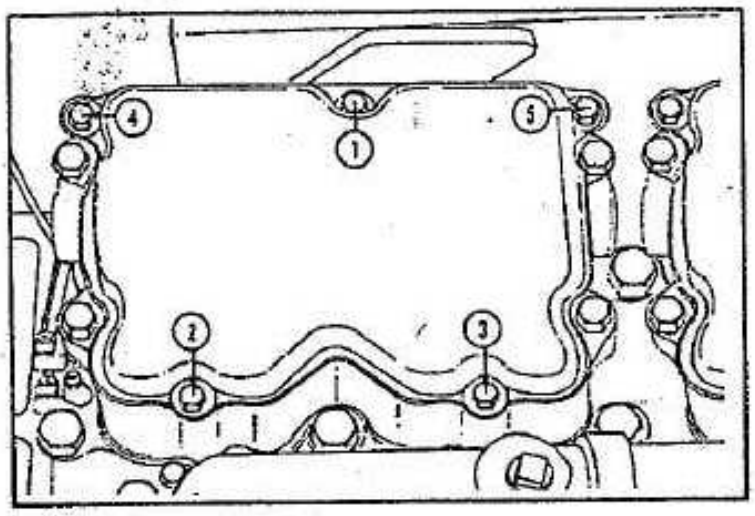


Valve Adjustment Sequence		
Bar Engine In Direction of Rotation	Pulley Position	Set Cylinder Valve
Start	A	5
Advance to	B	3
Advance to	C	6
Advance to	A	2
Advance to	B	4
Advance to	C	1
Firing Order:1-5-3-6-2-4		

Adjust the appropriate crossheads and the valves following the Valve Adjustment Sequence Chart.

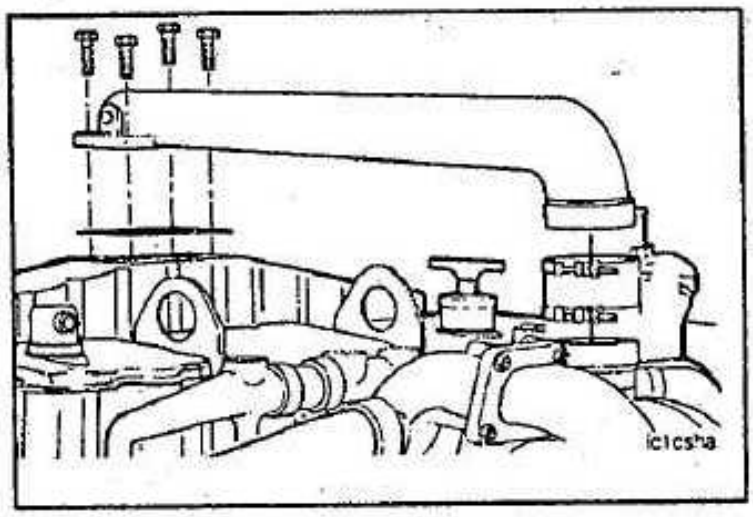
Repeat the process to adjust all injectors, crossheads, and valves correctly.

NOTE: All engines except the NTTA-450 allow adjustment of valves and injectors concurrently. The NTTA camshaft design characteristics necessitate that all injectors be set first, and then crossheads and valves be set using this procedure.



Install the rocker housing covers. Tighten the capscrews in each cover in the sequence shown.

Torque Value: 20 N•m [15 ft-lb]

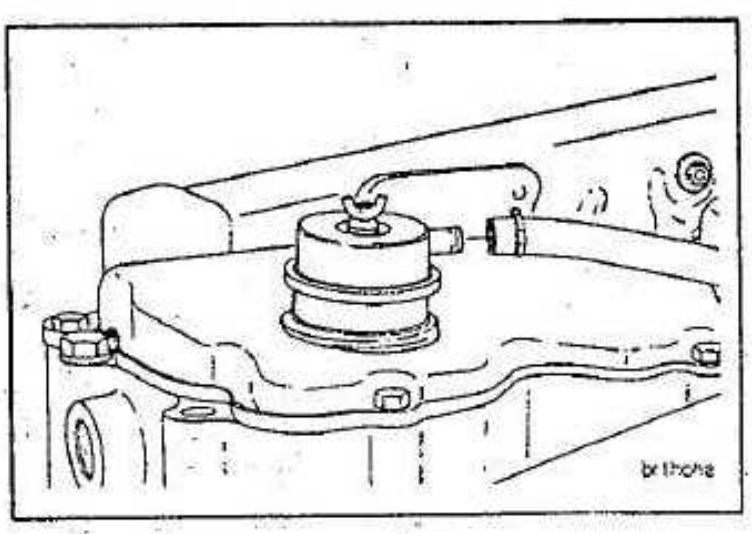


Install the crossover connection. Tighten the mounting capscrews.

Torque Value: 34 N•m [25 ft-lb]

Tighten the hose clamps.

Torque Value: 7.9 N•m [70 in-lb]



Install the crankcase breather element, the oil filler cap and hose. Tighten the hose clamp.

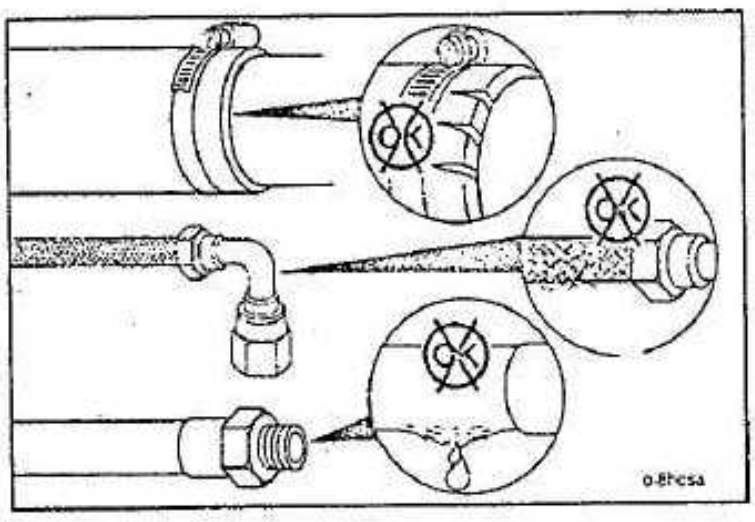
Torque Value: 4.5 N•m [40 in-lb]

Section 7 - Annual Maintenance Procedures

Section Contents

General Information

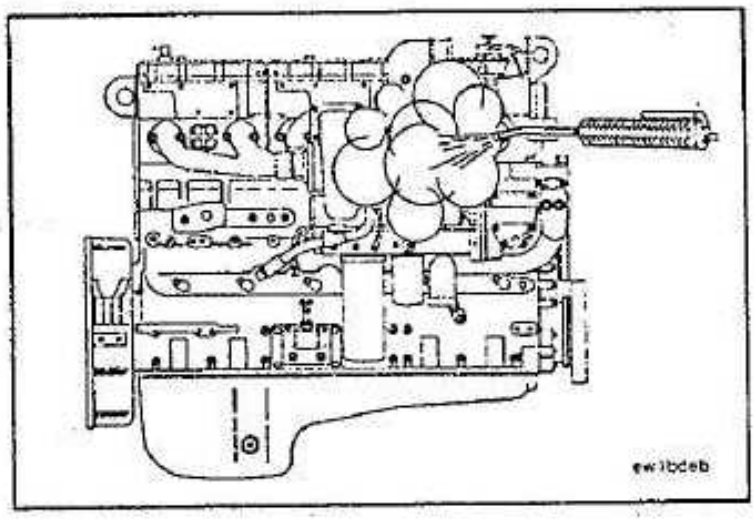
All checks or inspections listed under the previous maintenance intervals **must** also be performed at this time in addition to those listed under this maintenance interval.



Hoses

Checking and Replacement

Annually inspect the cooling system hoses and hose connections for leaks or deterioration. Particles of deteriorated hose can be carried through the cooling system and slow or partially stop circulation.



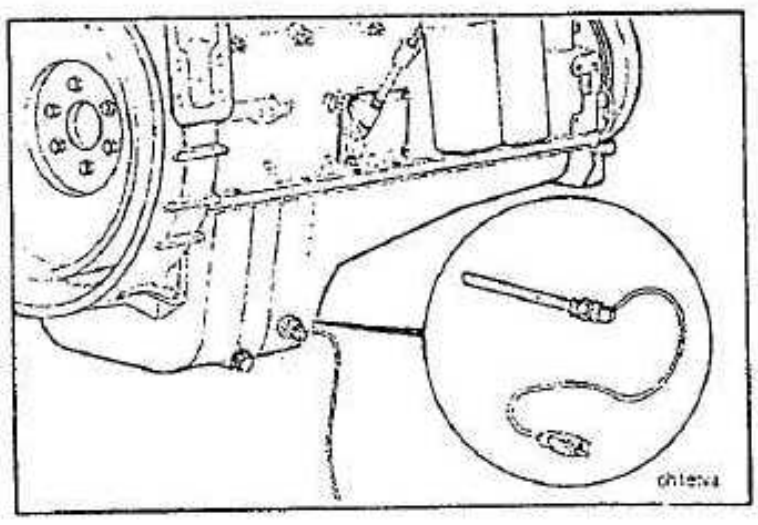
Engine

Steam or Chemically Clean

Warning: When using a steam cleaner, wear protective clothing and safety glasses or a face shield. Hot steam will cause serious personal injury.

The engine must be steam cleaned annually. Steam is the best method of cleaning a dirty engine or a piece of equipment. If steam is **not** available, use a solvent to wash the engine.

Protect all electrical components, openings, and wiring from the full force of the cleaner spray nozzle.



Thermal Aids

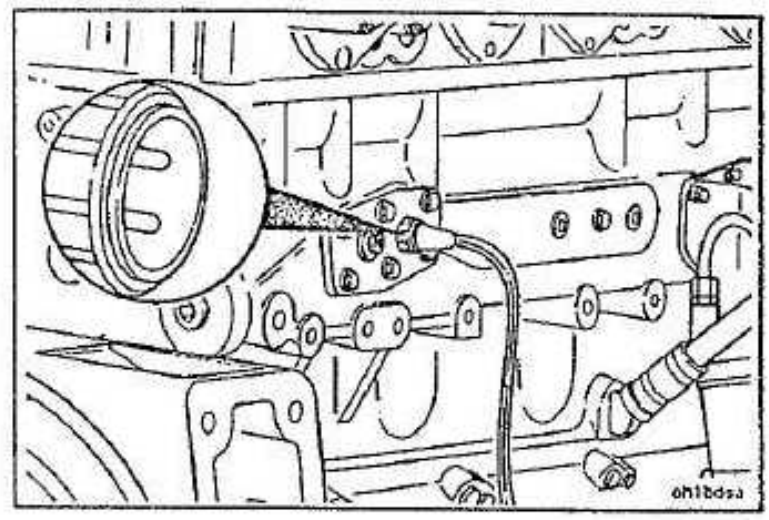
Checking

- Oil pan heater

Check for proper operation. Inspect for loose connections, frayed wires, and oil leaks. Repair or replace as needed.

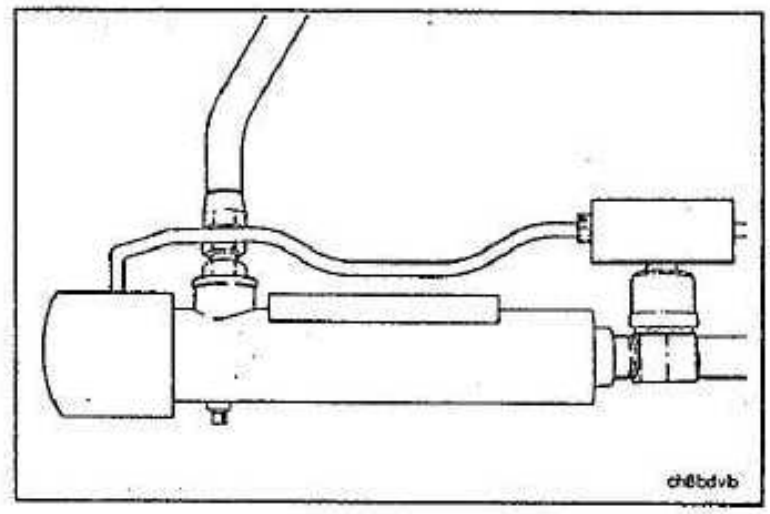
- Block heater

Check for proper operation. Inspect for loose connections, frayed wires, and oil leaks. Repair or replace as needed.



- Engine Pre-heater (Coolant)

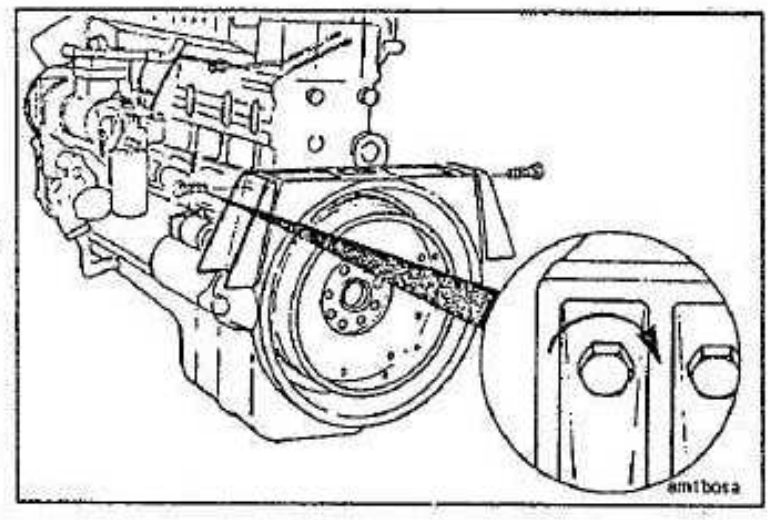
Check for proper operation. Inspect for loose connections, frayed wires, and coolant leaks. Clean out the unit of alkali and sludge. Clean the scale from the copper heating element with a wire brush.



Engine Mounting Bolts

Checking

Check the torque on the engine mount nuts and bolts annually. Tighten any that are loose. Refer to the equipment manufacturer for torque specifications. Inspect the rubber for deterioration and age hardening. Replace any broken or lost bolts, capscrews, or damaged rubber.



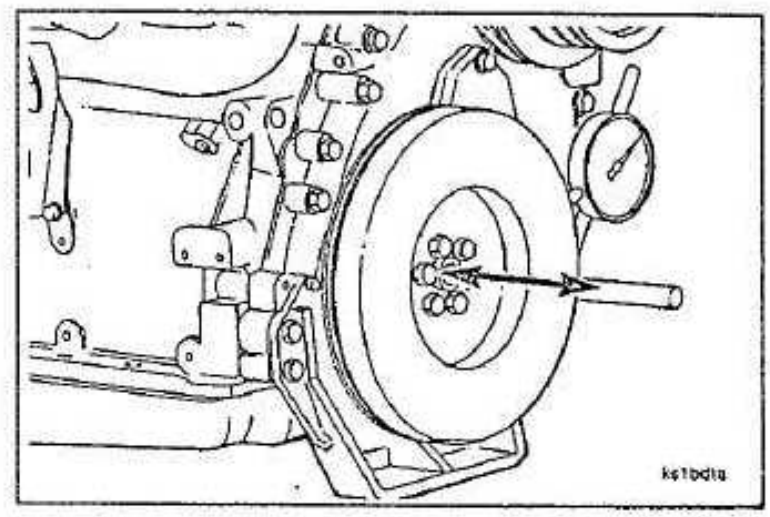
Crankshaft End Clearance

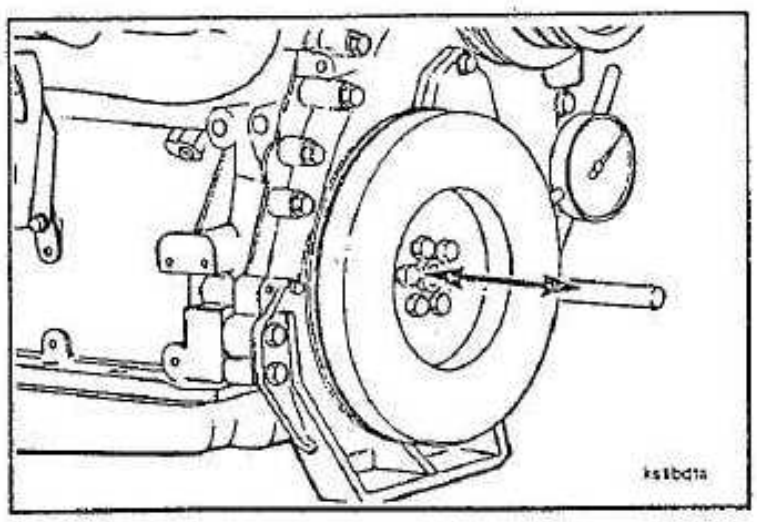
Checking

Measure the crankshaft end clearance with a dial indicator and make sure it meets the following specifications:

Crankshaft End Clearance Table

New Minimum	New Maximum	Worn Limit
0.10 mm [0.004 inch]	0.45 mm [0.018 inch]	0.56 mm [0.022 inch]

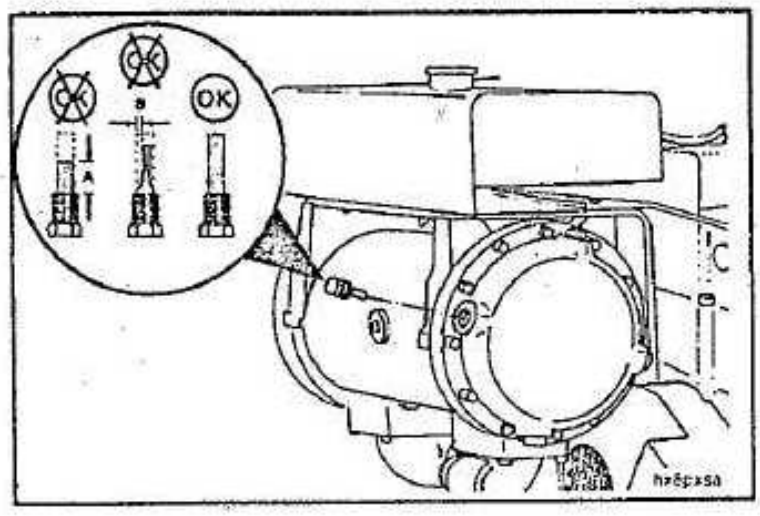




Caution: Extreme care MUST be used in prying against the viscous damper. Sharp pry bars can damage the damper casing, resulting in a leak of the viscous fluid and ultimate failure of the damper.

The check can be made by attaching an indicator to rest against the damper or pulley, while prying against the front cover and inner part of the pulley or damper. End clearance must be present with the engine mounted in the unit and assembled to the transmission or converter.

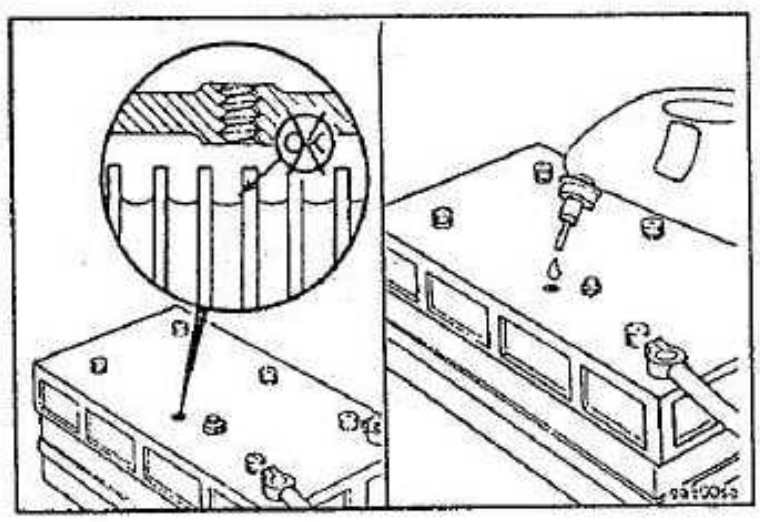
If the clearance is not within specifications, contact your Cummins Authorized Repair Location.



Heat Exchanger Zinc Plugs (Marine Only)

Checking

Check the length of all zinc plugs in the heat exchanger and change if they are 50 percent eroded. Frequency of change depends upon the chemical reaction of raw water circulated through the heat exchanger.



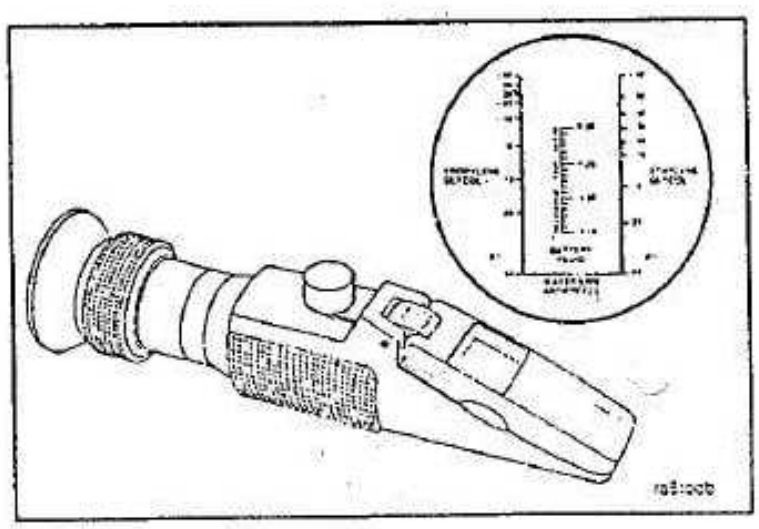
Batteries

Checking

If conventional batteries are used, remove the cell caps or covers and check the electrolyte (water and s uric acid solution) level.

NOTE: Maintenance-free batteries are sealed and do **not** require the addition of water.

Fill each battery cell with distilled water. Refer to the manufacturer's specifications.



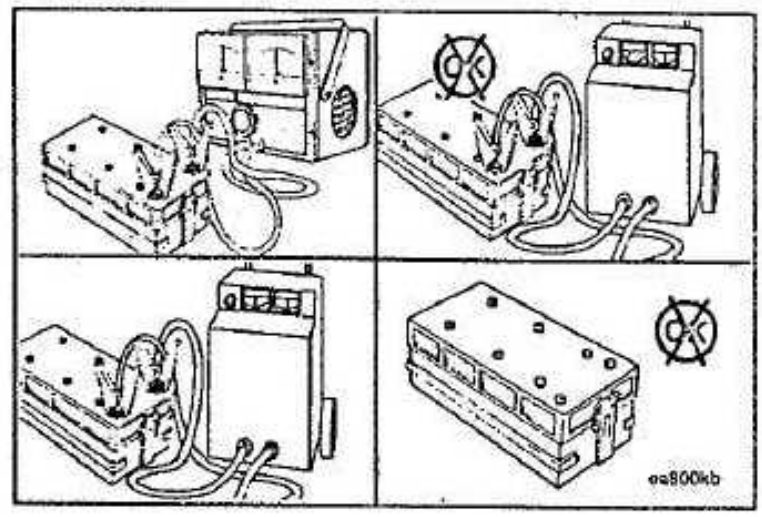
Use the Fleetguard® refractometer, Part No. CC-2800, to check the condition of the battery.

Refer to the battery fluid column in the refractometer to determine the state-of-charge of each battery cell.

Use battery tester, Part No. 3377193, to test the state-of-charge of maintenance-free batteries.

If the state-of-charge is low, use a battery charger to charge the battery. Refer to the manufacturer's instructions.

Replace the battery if it will **not** charge to the manufacturer's specifications or will **not** maintain a charge.



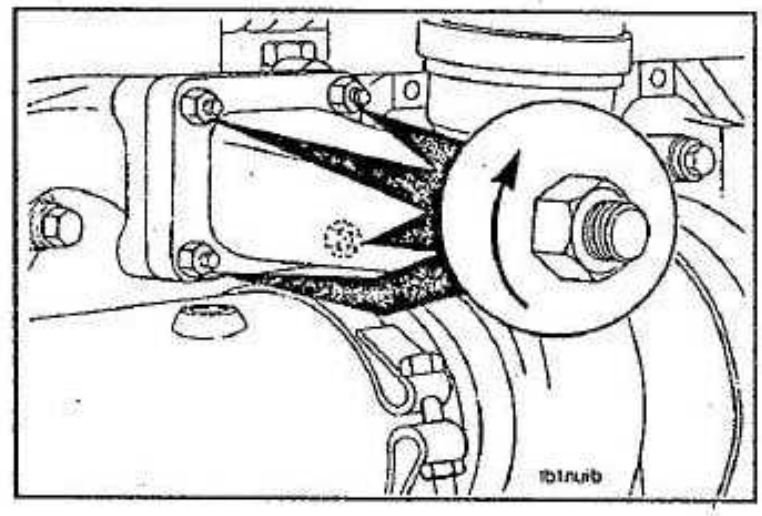
Turbocharger Mounting Nuts

Checking

Check the turbocharger mounting nuts annually.

Tighten the mounting nuts.

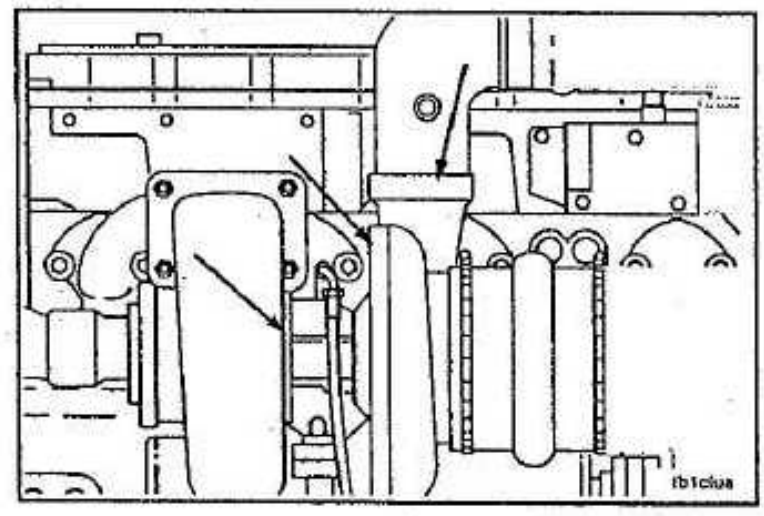
Torque Value: 48 N•m [35 ft-lb]



Check the v-band clamps annually. Tighten the clamps:

- Discharge/elbow
- Compressor housing
- Turbine housing

Torque Value: 8 N•m [75 in-lb]



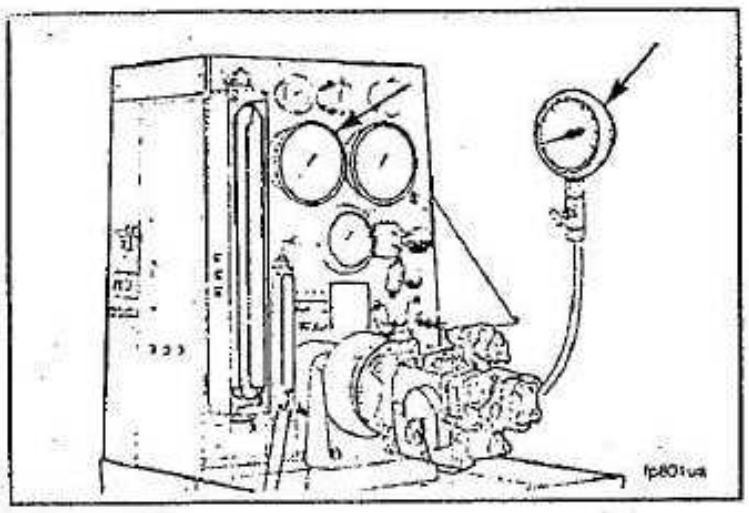
NOTES

Section 8 - Maintenance Procedures Every 6,000 Hours or 2 Years

Section Contents

General Information

All checks or inspections listed under the previous maintenance intervals **must** also be performed at this time in addition to those listed under this maintenance interval.

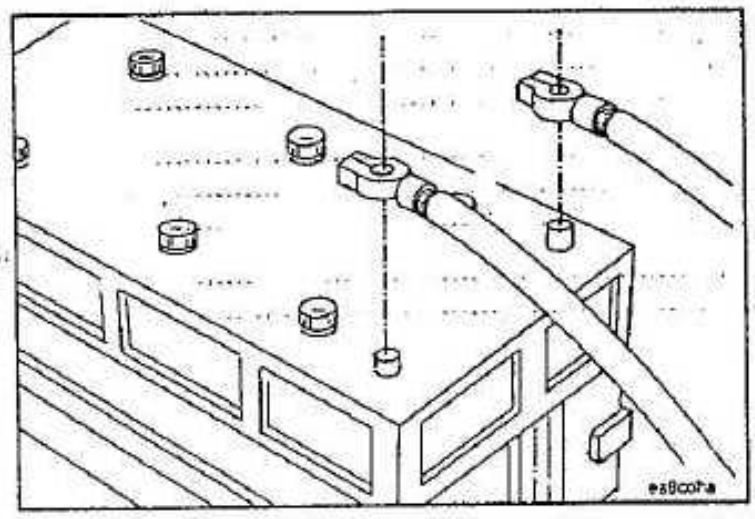


Fuel Pump

Cleaning and Calibration

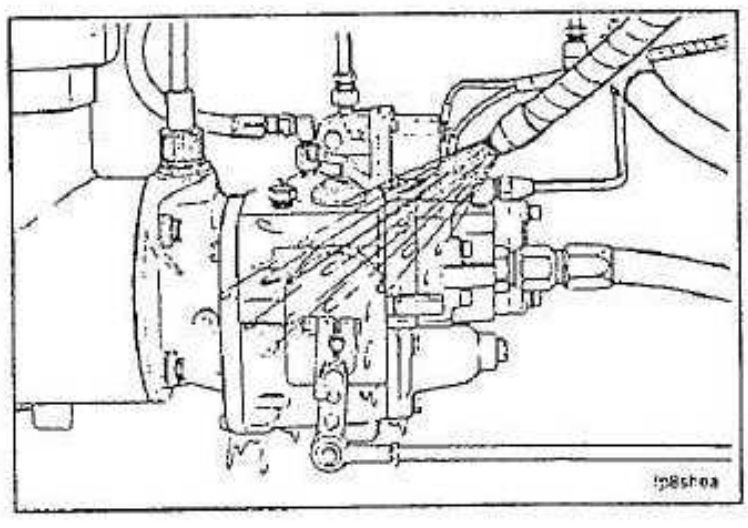
Every 6,000 hours or 3 years clean and calibrate the fuel pump.

NOTE: This procedure requires special equipment and **must** be done at a Cummins Authorized Repair Location.



Removal

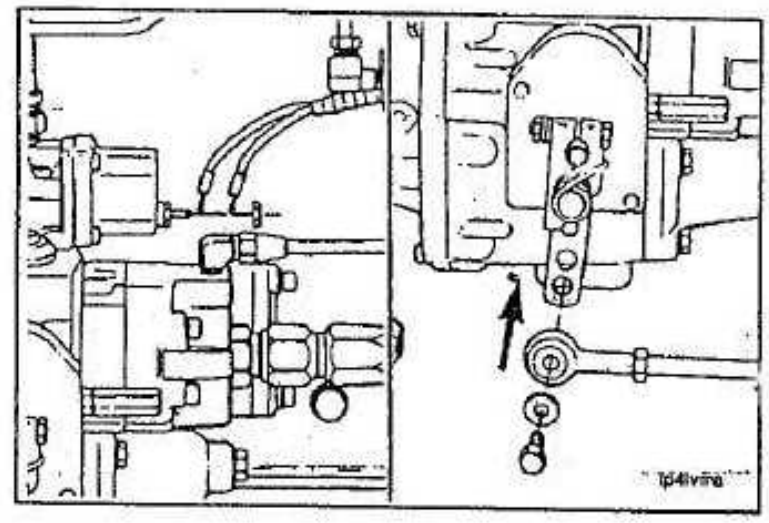
Disconnect the battery cables.



Clean the fuel pump and the surrounding area **before** removing it from the engine.

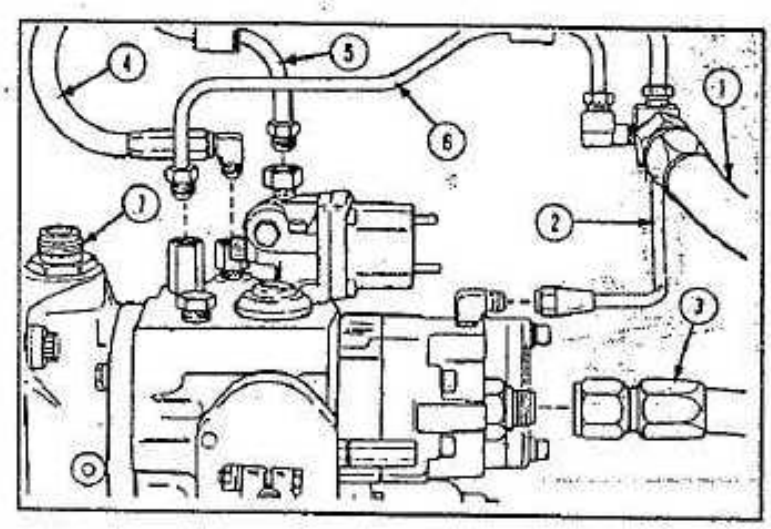
Disconnect the wires to the fuel shutoff valve.

Disconnect the linkage from the throttle lever.

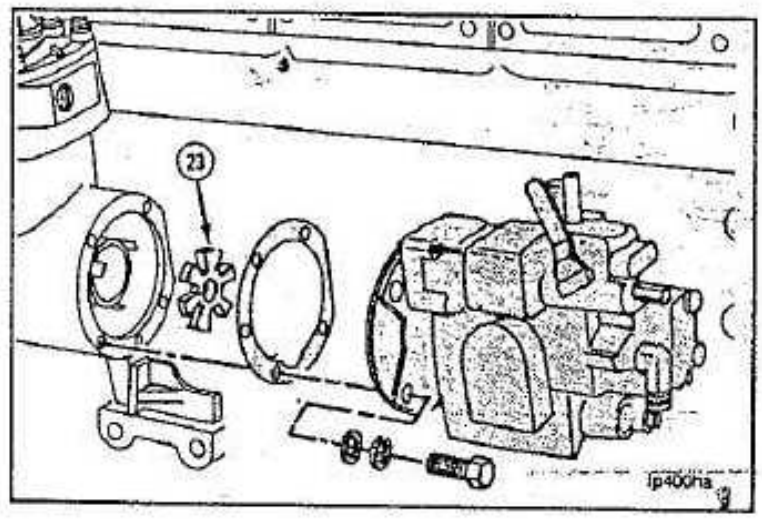


Disconnect the fuel tubing and air hose.

- Fuel drain (1).
- Gear pump cooling drain (2).
- Gear pump suction line (3).
- AFC air hose (4).
- Fuel supply to injectors (5).
- AFC fuel drain (6).
- Tachometer cable (7).



Remove the four mounting capscrews, and the fuel pump. Remove the drive coupling (23). Remove and discard the gasket.

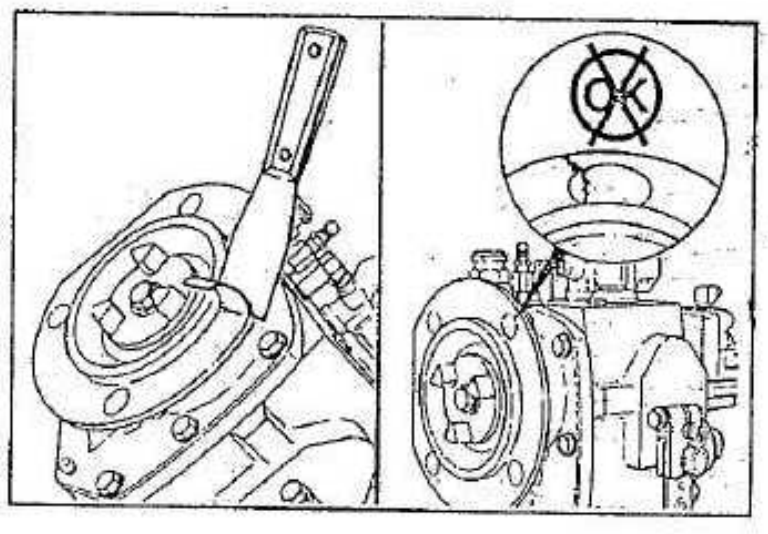


Cleaning and Inspection

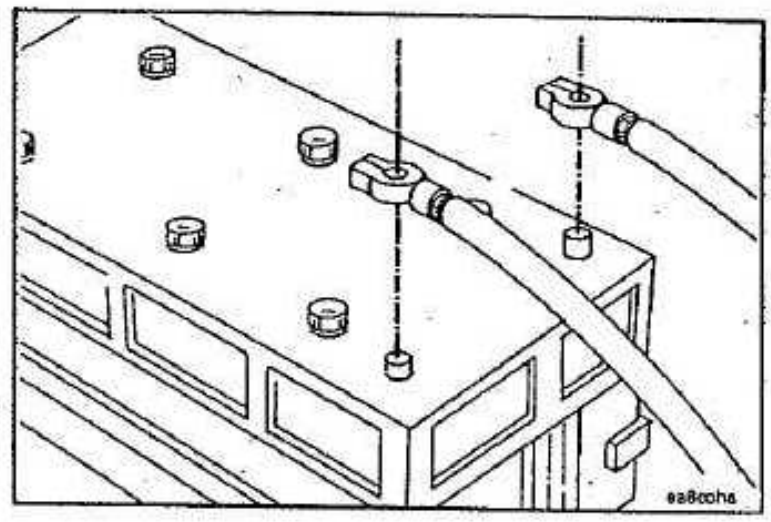
Clean the fuel pump and the air compressor or accessory drive mounting surfaces.

Inspect the mounting surfaces for damage.

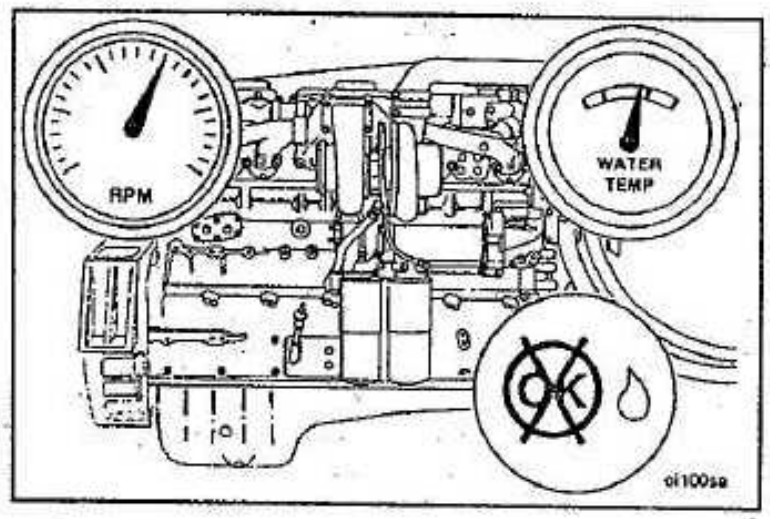
Take the fuel pump to a Cummins Authorized Repair Location for calibration.



Connect the battery cables.



Operate the engine to normal operating temperature and check for leaks.

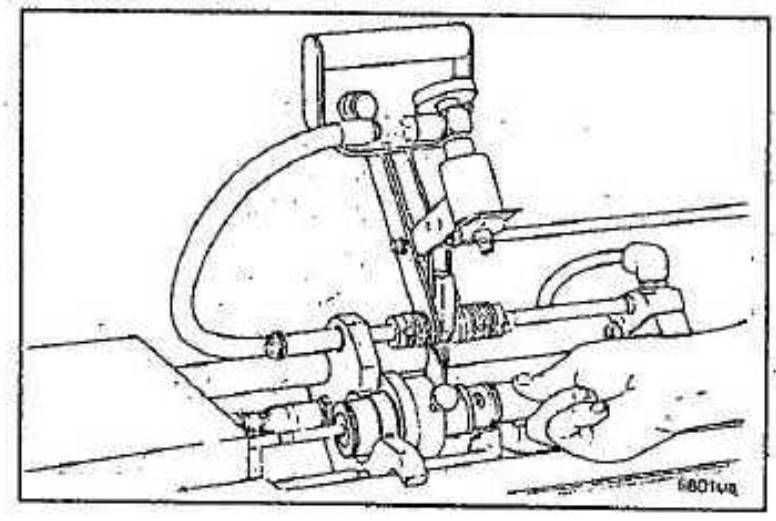


Injectors

Cleaning and Calibration

Every 6,000 hours or 3 years clean and calibrate the injectors.

NOTE: This procedure requires special equipment and must be done at a Cummins Authorized Repair Location.

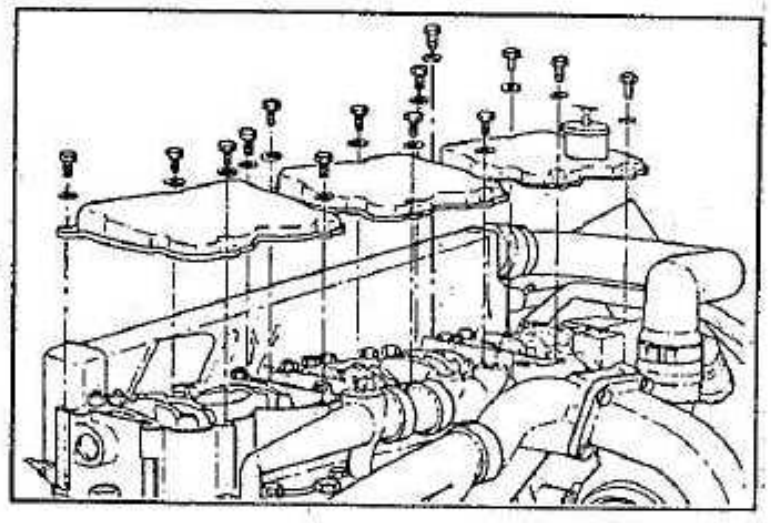


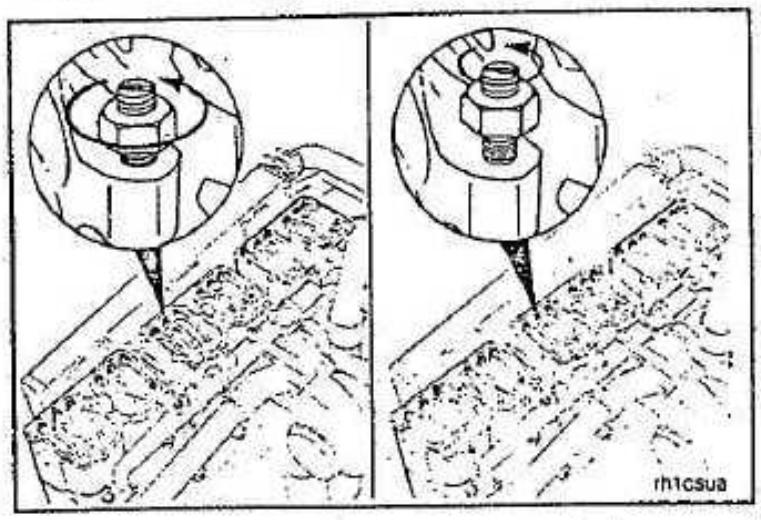
Injectors - Replacement

Removal - PTD

To clean and calibrate the injectors, remove them from the engine. The injectors must be calibrated on an injector test stand. Refer to Bulletin No. 3379071 - Rebuild Manual; Injectors PT (all types), or Bulletin No. 3810344 - Shop Manual PT (Type D) Top Stop Injector, for rebuild and calibration procedures.

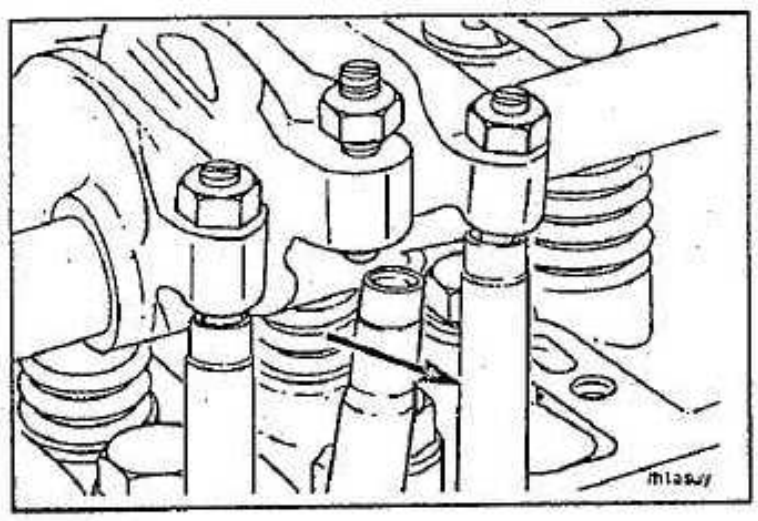
Remove the rocker lever cover assembly.



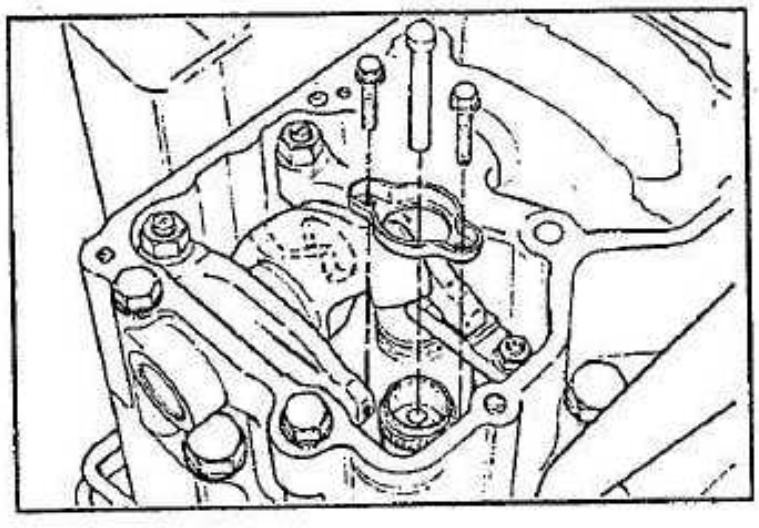


Loosen the adjusting screw lock nut on each injector rocker lever.

Turn out the adjusting screw on each injector rocker lever.



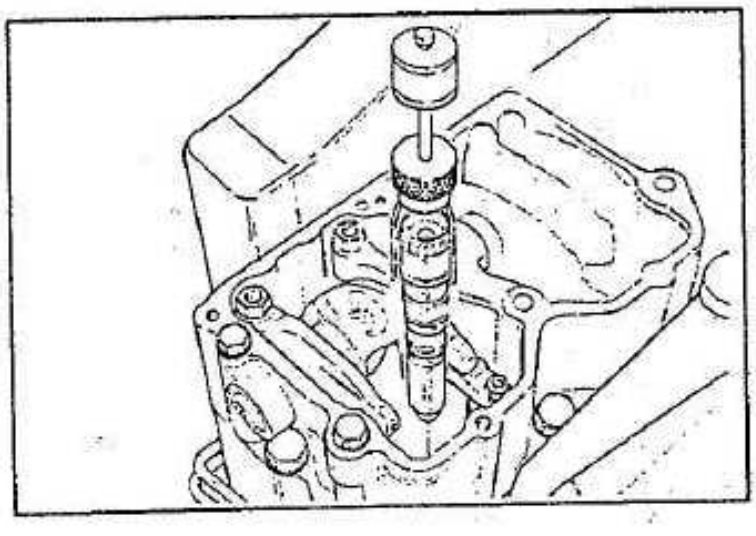
Move the injector push rods to the side.



Rotate the injector rocker levers up on each cylinder.

Remove the injector link.

Remove the hold down clamp capscrews and the injector hold down clamp.



Caution: Do not drop or damage the injector plunger.

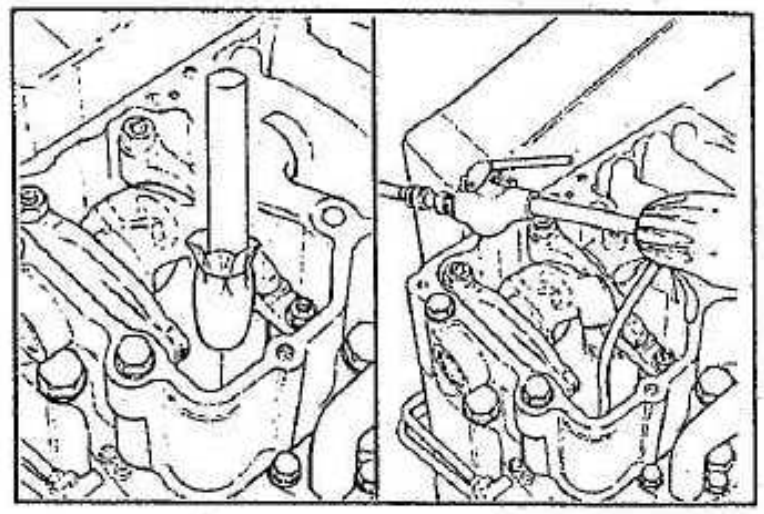
Use Part No. 3376872, Injector Puller, to remove the injectors.

- Take the injectors to a Cummins Authorized Repair Location.

Use a clean wooden stick with a clean cloth wrapped around the end to remove all of the carbon from the injector copper sleeves in the cylinder head.

Caution: Do not use anything metal to scrape the injector copper sleeve.

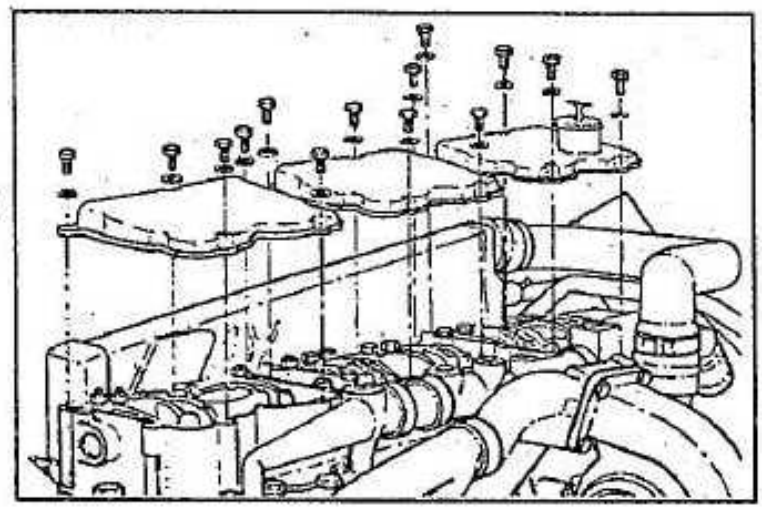
NOTE: Use ST-1272-11 Chip Removing Unit to remove the carbon from the top of the piston.



Removal - STC

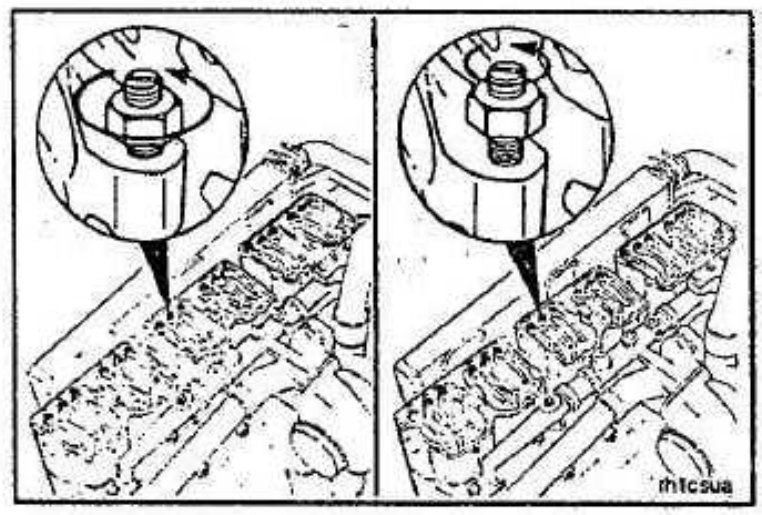
To clean and calibrate the injectors, remove them from the engine. The injectors **must** be calibrated on an injector test stand. Refer to Bulletin No. 3810313 - Shop Manual PT (Type D) Step Timing Control Injector, for rebuild and calibration procedures.

Remove the rocker lever cover assembly.



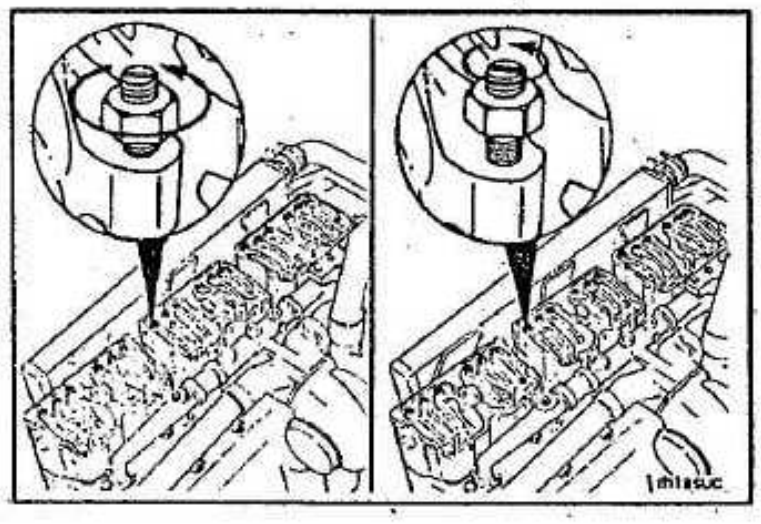
Loosen the adjusting screw lock nut on each injector rocker lever.

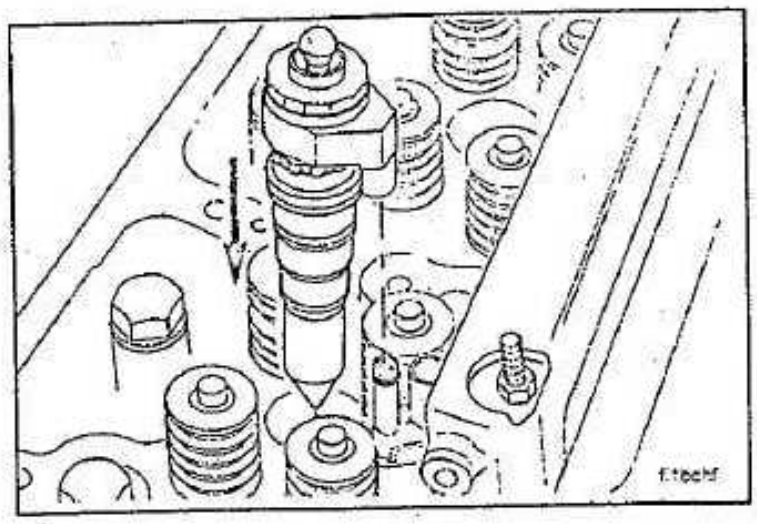
Turn out the adjusting screw on each injector rocker lever.



Loosen the adjusting screw lock nut on each exhaust valve rocker lever.

Turn out the adjusting screw on each exhaust valve rocker lever.

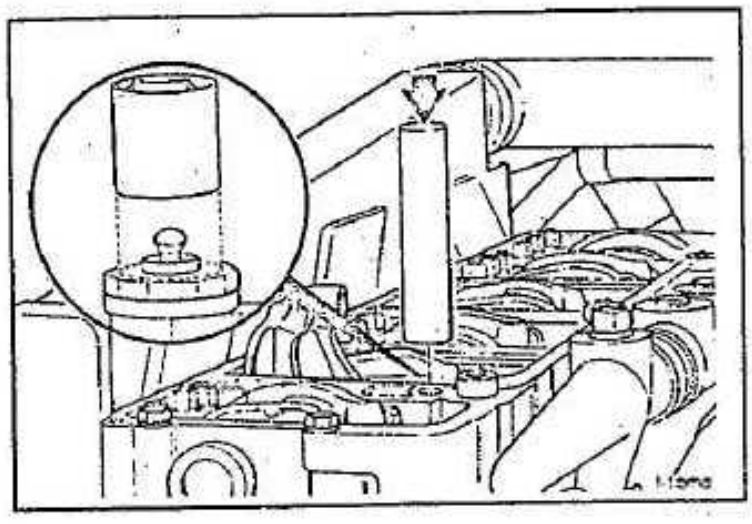




Align the oil hole on the tappet top stop lock nut with the oil supply tube on the STC oil connection block.

NOTE: Use an air gun to blow the oil from the hold down capscrew holes in the head.

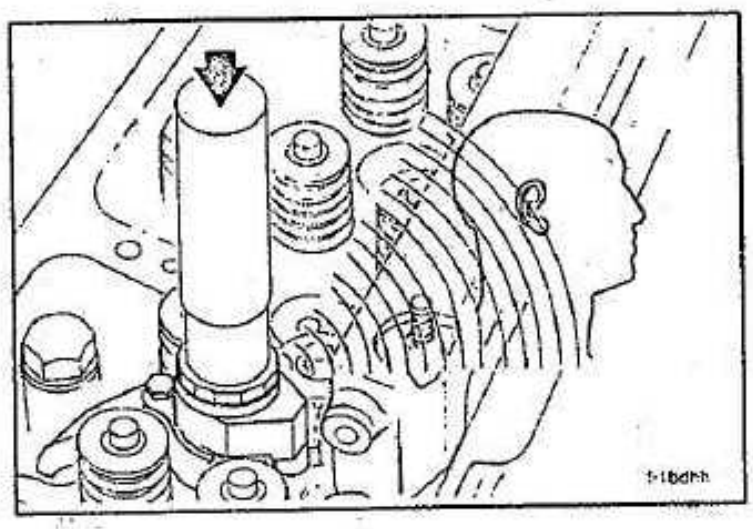
Install the injector hold down, hold down capscrew and injector into the cylinder head injector bore.



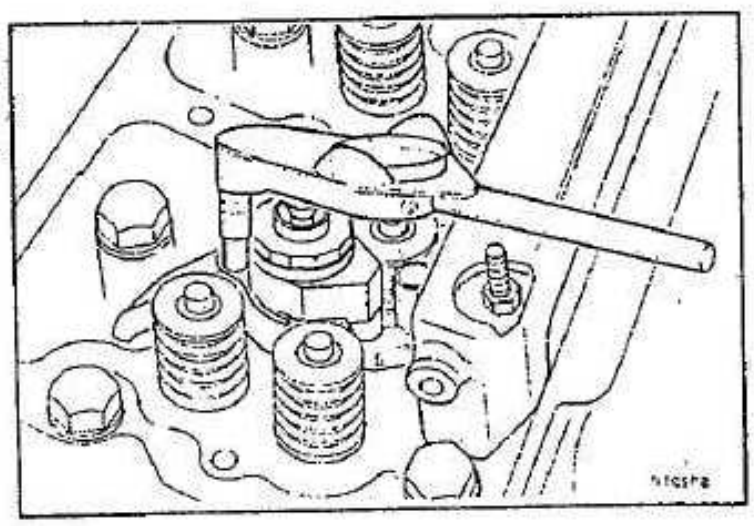
Install a deep well socket over the top link of the injector. Use a blunt instrument to seat the injector in the cup.

Caution: Be sure to place the instrument on the socket or the body of the injector, not on the plunger or link.

Use the largest socket which will still rest completely on the top surface of the injector.



A "snap" will be heard and felt as the injector is seated.

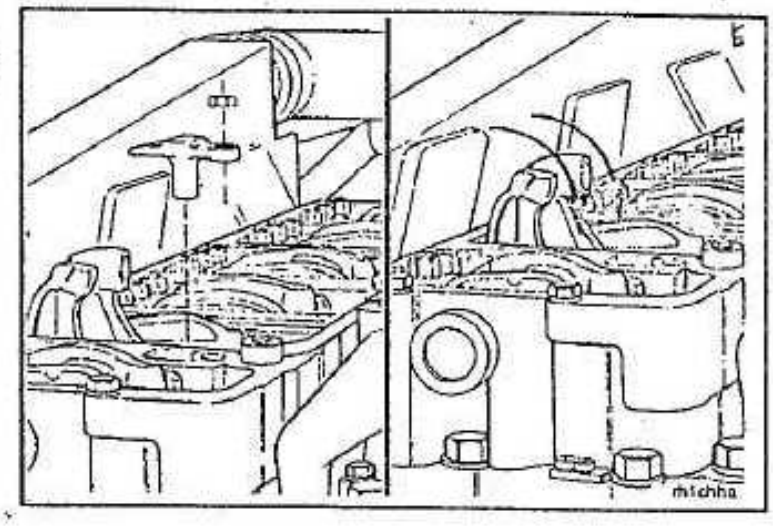


Tighten the capscrew.

Torque Value: 54 N•m [40 ft-lb]

Install the exhaust valve crosshead.

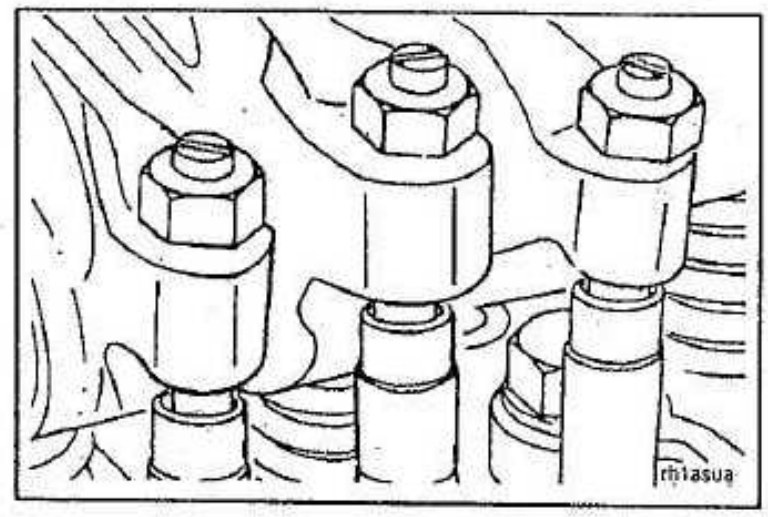
Rotate the exhaust valve rocker lever down on each cylinder.



Rotate the injector rocker lever down on each cylinder.

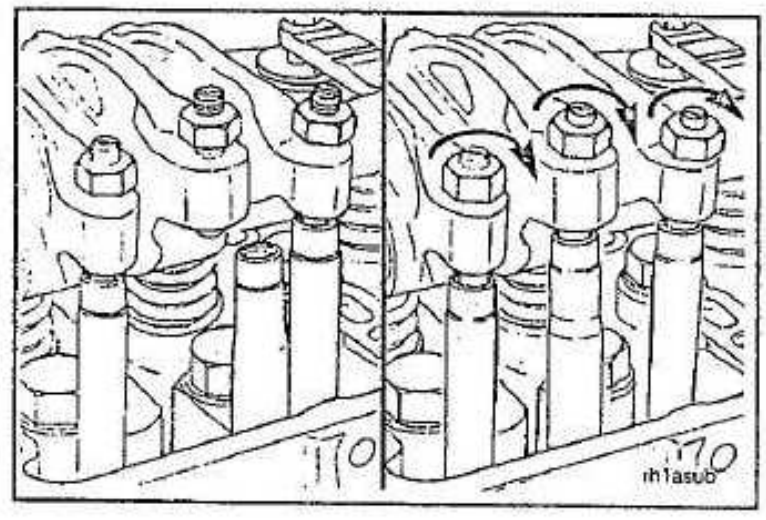
Align the push rods with the injector and exhaust valve rocker levers.

Caution: Do not drop the push rods.



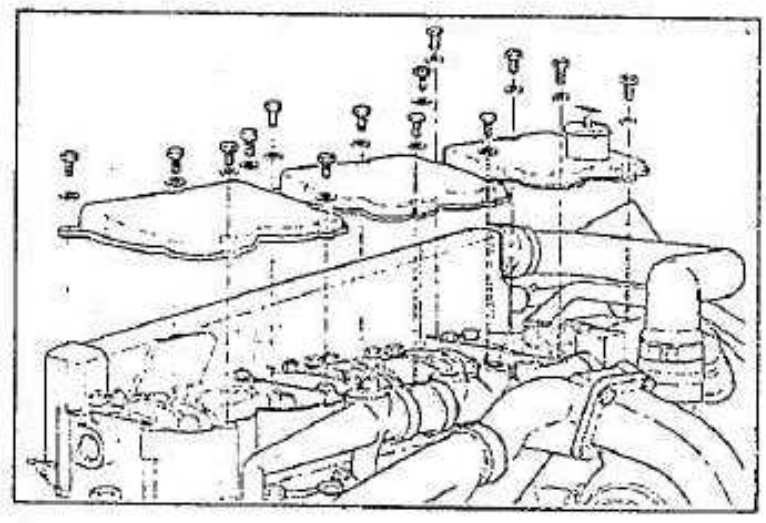
Turn the adjusting screw for the injector and exhaust rocker lever in until it is properly seated in the push rod socket.

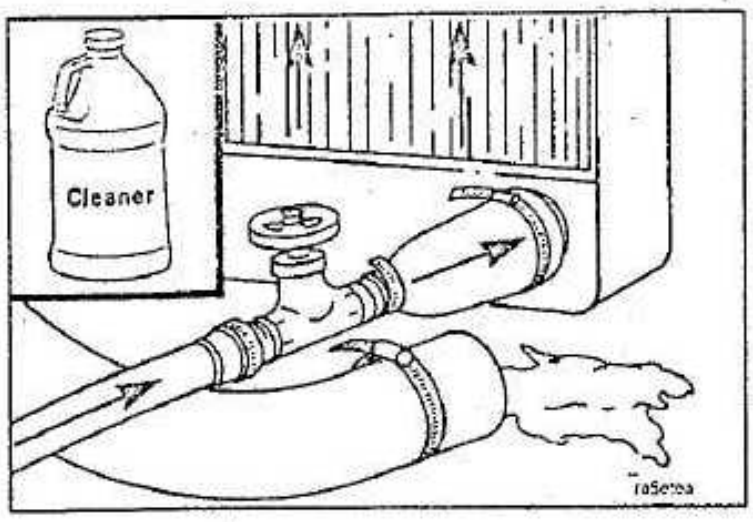
Adjust all crossheads, valves, and injectors. Refer to Section 6.



Install the rocker housing cover gasket.

Install the rocker lever cover.





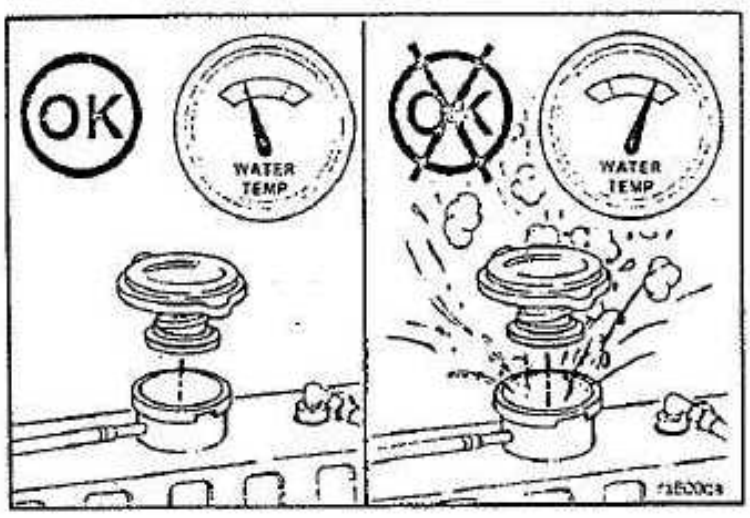
Cooling System

Clean System and Replace Antifreeze/Water and DCA

Caution: Do not use caustic cleaners in the cooling system. Aluminum components will be damaged.

Drain and flush the cooling system after 2 years or 6000 hours of service. Refill with new **heavy duty coolant** and install the **correct service coolant filter.**

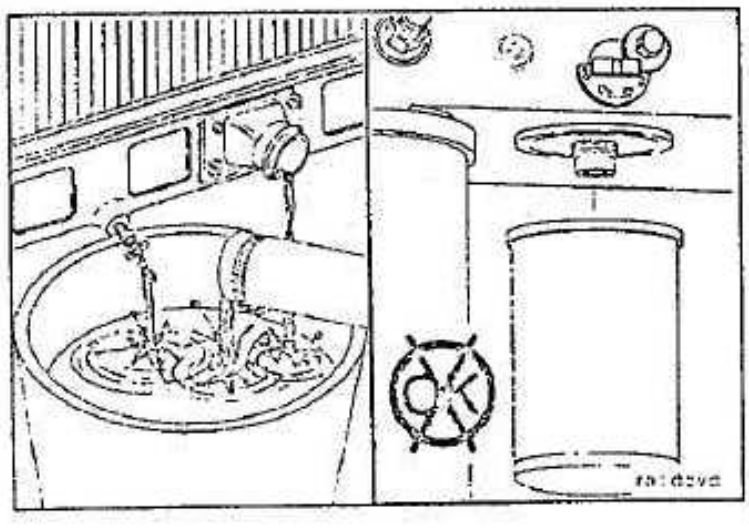
The cooling system **must** be clean to work correctly and to eliminate buildup of harmful chemicals



Warning: Wait until the temperature is below 50°C [120°F] before removing the coolant system pressure cap. Failure to do so can cause personal injury from heated coolant spray.

NOTE: The performance of RESTORE is dependent on time, temperature, and concentration levels. An extremely scaled or flow restricted system, for example, may require higher concentrations of cleaners, higher temperatures, or longer cleaning times or the use of RESTORE PLUS. RESTORE can be safely used up to twice the recommended concentration levels. RESTORE PLUS **must** be used only at its recommended concentration level. Extremely scaled or fouled systems may require more than one cleaning.

RESTORE	CC2610	(1 gallon)
RESTORE	CC2611	(5 gallons)
RESTORE	CC2612	(55 gallons)
RESTORE PLUS	CC2638	(1 gallon)



NOTE: Engine coolant and RESTORE **must** be disposed of in a responsible manner. Please consult the local environmental agency for recommended disposal guidelines.

Drain the cooling system. Do **not** allow the cooling system to dry out. RESTORE will **not** be as effective if the cooling system is allowed to dry.

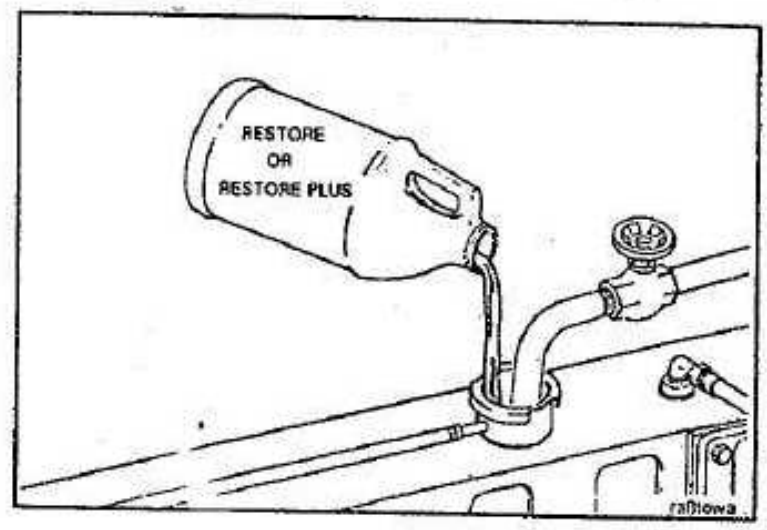
Do **not** remove the coolant filter.

NOTE: If the coolant is **not** going to be reused, dispose of used coolant/antifreeze in accordance with federal, state, and local laws and regulations.

Caution: Fleetguard® RESTORE contains no antifreeze. Do not allow the cooling system to freeze during the cleaning operation. ⚠

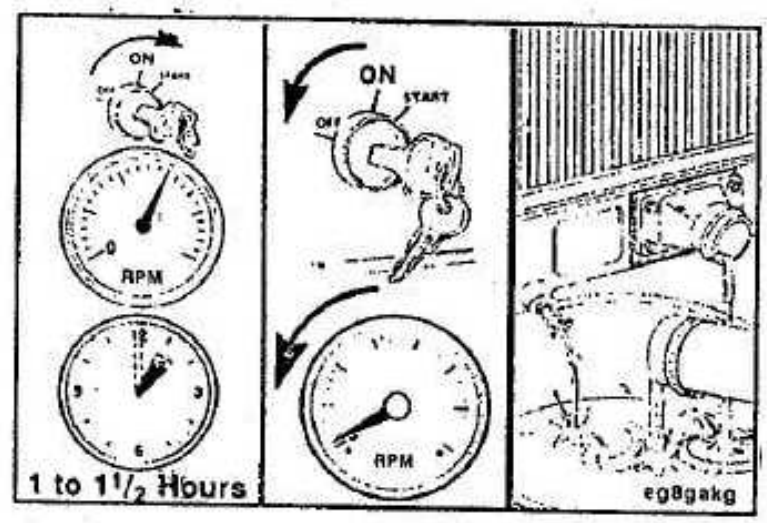
Immediately add 3.8 liters [1 U.S. gallon] of Fleetguard® RESTORE, RESTORE PLUS (or equivalent), for each 38 to 57 liters [10 to 15 gallons] of cooling system capacity, and fill the system with plain water.

Turn the heater temperature switch to high to allow maximum coolant flow through the heater core. The blower does not have to be on.

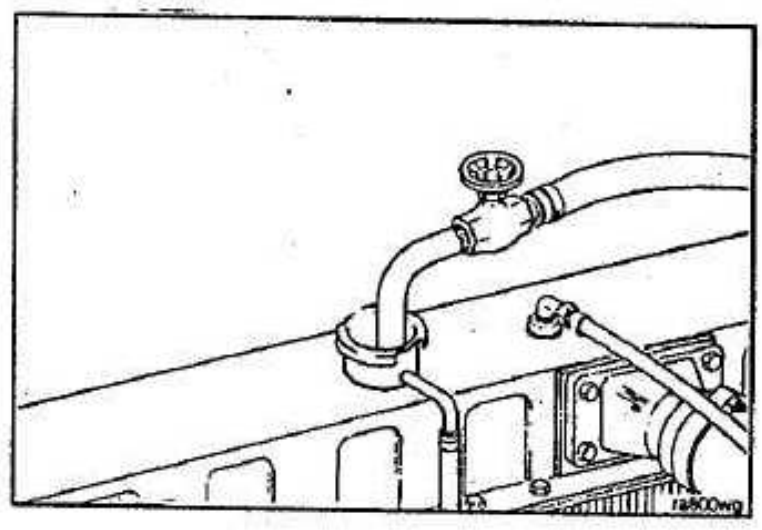


Operate the engine at normal operating temperatures (at least 85°C [185°F] for 1 to 1 1/2 hours.

Shut the engine off, and drain the cooling system.



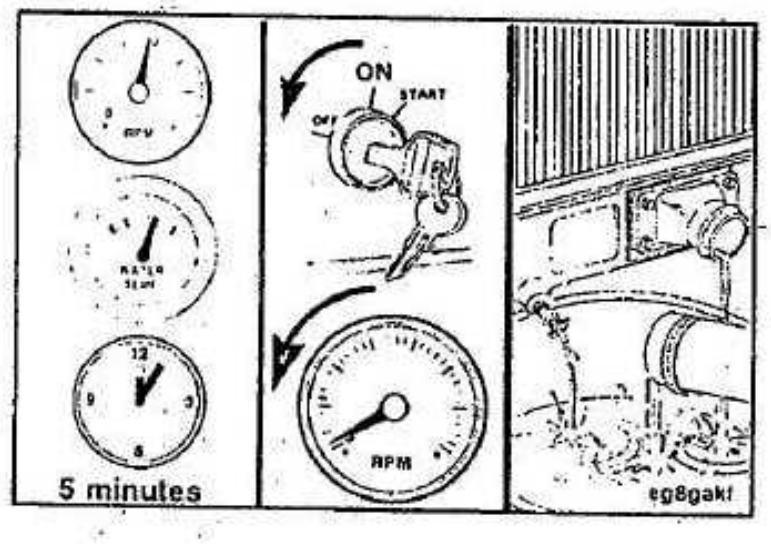
Fill the cooling system with clean water to flush the cooling system.

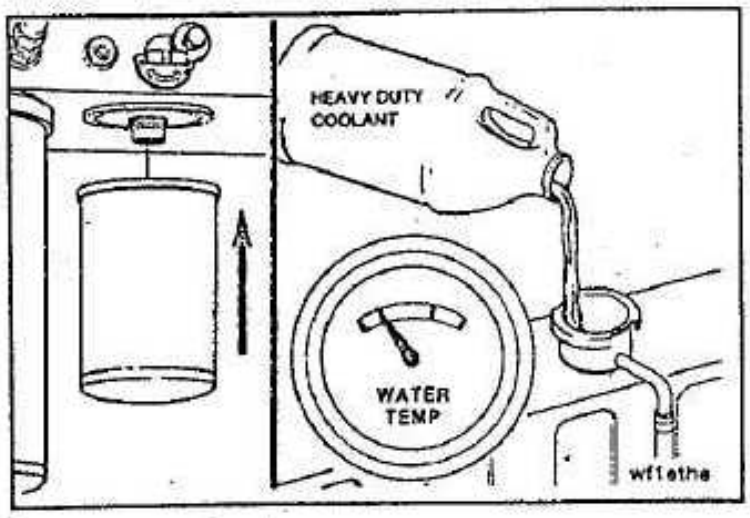


Operate the engine at high idle for 5 minutes with the coolant temperature above 85°C [185°F].

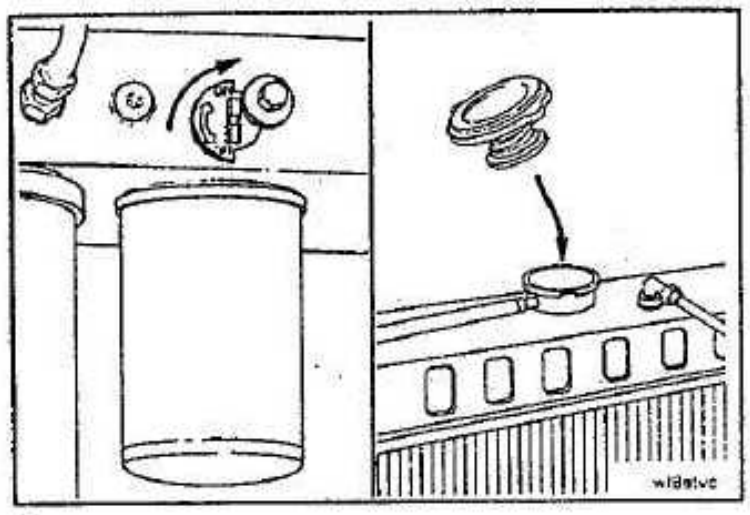
Shut the engine off, and drain the cooling system.

NOTE: If the water being drained is still dirty, the system must be flushed again until the water is clean.



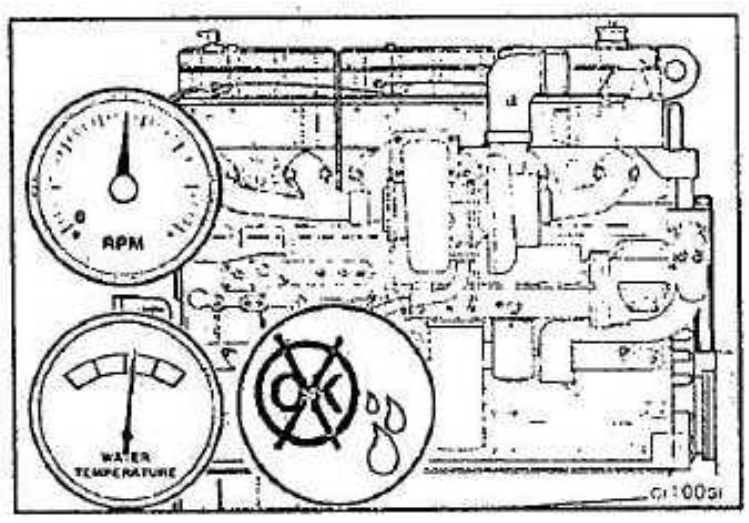


Fill the cooling system with heavy duty coolant. Heavy duty coolant is defined as a correct mixture of good quality water, low silicate antifreeze, and supplemental coolant additives (SCA's). Refer to Section V for the correct way to mix up heavy duty coolant. Install the correct service filter. Refer to the DCA4 Service Filter Selection Chart in Section V.

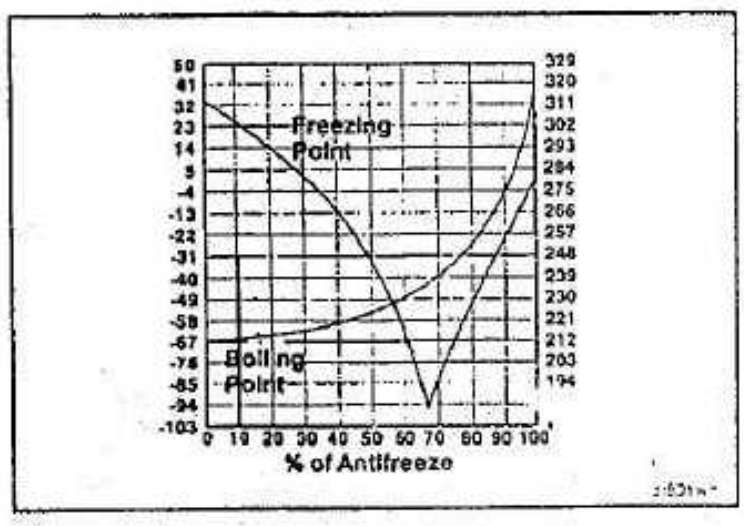


Open the shut-off valve and install the coolant system pressure cap.

Caution: Engine damage will result if the valve is left closed.



Operate the engine until it reaches a temperature of 80°C [180°F], and check for coolant leaks.

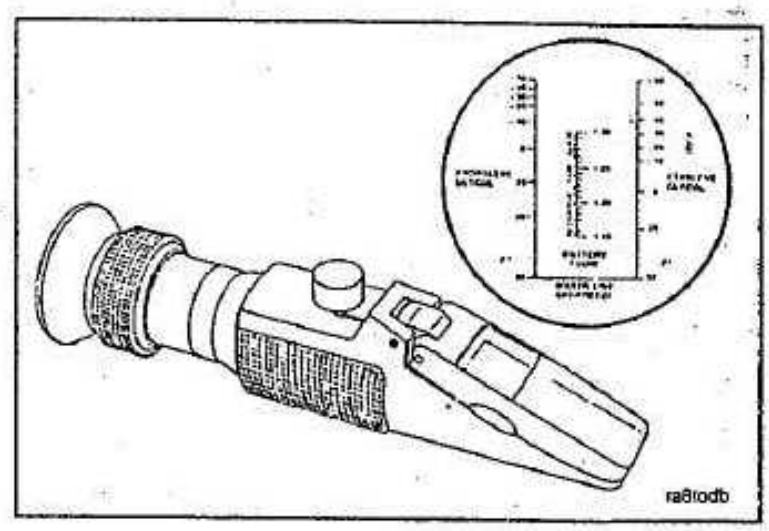


Low-silicate antifreeze **must** be mixed with quality water at a 50/50 ratio (40 to 60% working range). A 50/50 mixture of antifreeze and water gives a -34°F freeze point and a boiling point of 228°F, which is adequate for locations in North America. The actual lowest freeze point of ethylene glycol antifreeze is at 68%. Using higher concentrations of antifreeze will raise the freeze point of the solution and increase the possibility of a silicate gel problem.

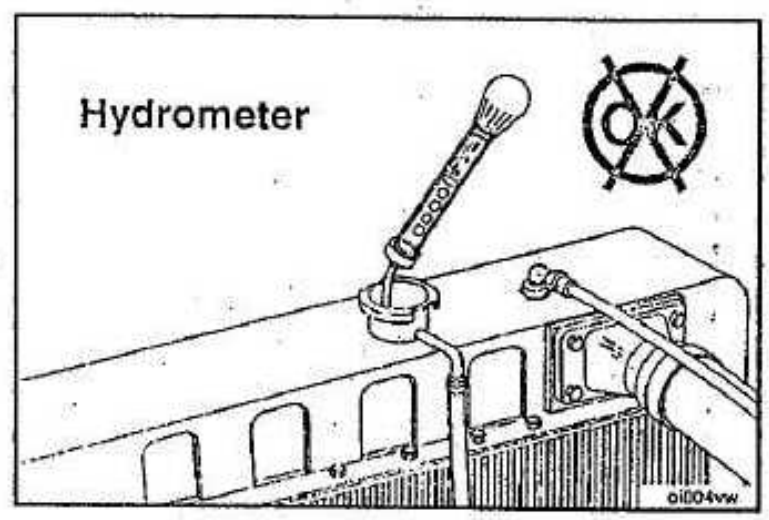
Refer to Section V for Coolant Recommendations/ Specifications.

The Fleetguard® refractometer, Part No. C2800, provides a reliable and easy to read measurement of freeze point protection and glycol (antifreeze) concentration.

The freeze point protection **must** be checked if coolant is added to the cooling system. Refer to the manufacturer's instructions for correct operation.



Using floating ball hydrometers will give incorrect readings.



Fan Hub (Belt Driven)

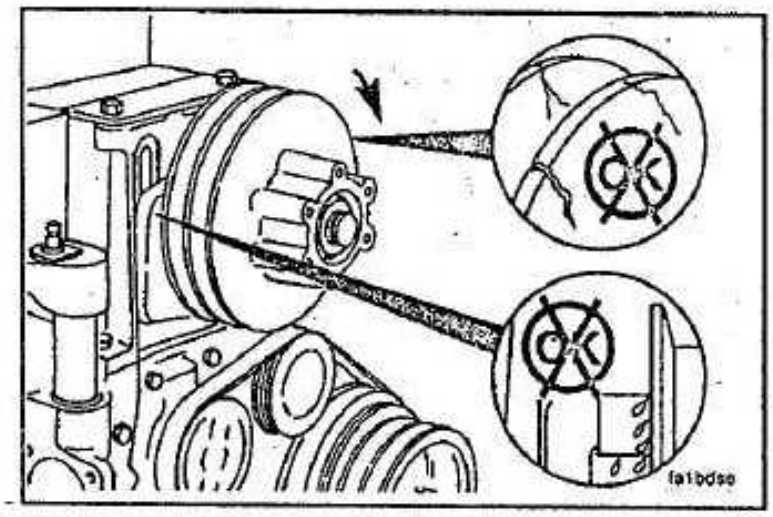
Inspection

Every 6,000 hours or 2 years inspect the fan hub for the following:

- Freedom of rotation
- Cracks
- Grease seal leakage

Repair or replace the fan hub if the fan hub does **not** rotate freely or if there is evidence of cracks or grease seal leakage.

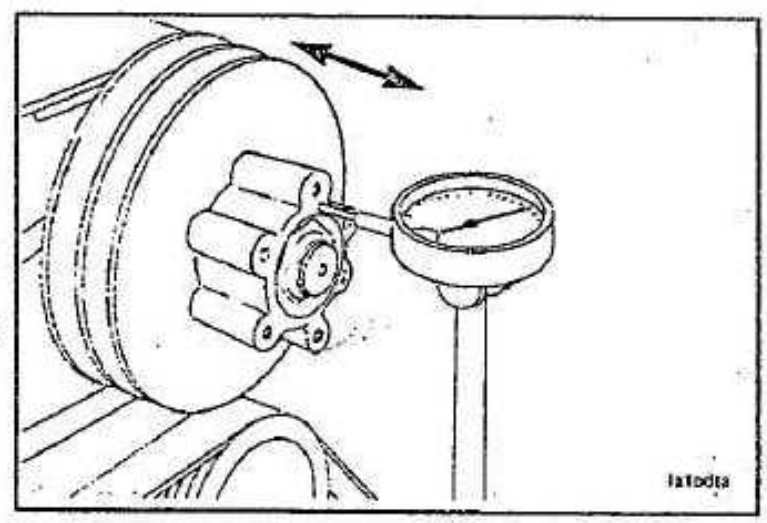
Refer to the Troubleshooting and Repair Manual for removal and replacement instructions.



Measure the fan hub ***end clearance.*** Fan hubs with "step-bore" shafts and no bearing spacers **must** be 0.08 mm to 0.25 mm [0.003 inch to 0.010 inch] end clearance.

Fan hubs with "through-bore" shafts with inner and outer bearing spacers **must** be 0.08 mm to 0.41 mm [0.003 inch to 0.016 inch] end clearance.

Replace the fan hub if the end clearance is **not** within these specifications. Refer to the Troubleshooting and Repair Manual for removal and replacement instructions.



Section T - Troubleshooting

Section Contents

Troubleshooting Guide for the Operator

Warning: Performing troubleshooting procedures not outlined in this section can result in equipment damage or personal injury. Consult a Cummins Authorized Repair Location for diagnosis and repair beyond that which is outlined and for symptoms not listed in this section. Before beginning any troubleshooting, please refer to General Safety Instructions in Section i of this manual.

This guide describes some typical engine operating problems, their causes, and some acceptable corrections to those problems. For more procedure information, refer to the Troubleshooting and Repair Manual. Unless noted otherwise, the problems listed are those which an operator can diagnose and repair.

Follow the suggestions below for troubleshooting:

- Study the problem thoroughly before acting.
- Refer to the engine system diagrams.
- Do the easiest and most logical things first.
- Find and correct the cause of the problem.

Instructions

Read each row of blocks from top to bottom. Follow the arrows through the chart to identify corrective action.

Engine Will Not Crank or Cranks Slowly (Air Starter)

Cause	Corrections
Incorrect Oil For Operating Conditions	Change oil and filters. Use recommended type (15W-40).
OK ↓	
Oil Temperature Too Low	Install oil pan heater.
OK ↓	
Insufficient Air Pressure	Increase pressure using external air supply.
OK ↓	
Starting Motor Malfunctioning or Incorrect Starting Motor	Refer to manufacturer's instructions.
OK ↓	
External or Internal Conditons Affecting Engine Crankshaft Rotation	Check engine for ease of crankshaft rotation.
OK ↓	
Contact a Cummins Authorized Repair Facility	

Engine Will Not Crank or Cranks Slowly (Electric Starter)

Cause	Corrections
Incorrect Oil	Change oil and filters. Use recommended type (15W-40).
OK ↓	
Oil Temperature Low	Install oil pan heater.
OK ↓	
Battery Rating Too Low	Replace with correct rating.
OK ↓	
Battery Temperature Too Low	Check battery heater operation.
OK ↓	
External or Internal Condiitons Affecting Engine Crankshaft Rotation	Check engine for ease of crankshaft rotation.
OK ↓	
Battery Connections Broken, Loose or Corroded	Check battery connections.
OK ↓	
Battery Charge Low	Check electrolyte level and specific gravity.
OK ↓	
Starting Circuit Component Malfunction	Check starting circuit components.
OK ↓	
Contact a Cummins Authorized Repair Facility	

Engine Hard to Start or Will Not Start (Exhaust Smoke Present)

Cause	Corrections
Engine Cranking Speed Low (Below 150 RPM)	Check engine cranking RPM.
OK ⬌	
Engine Driven Units Engaged	Disengage engine driven units.
OK ⬌	
Cold Start Aid Needed or Not Working Correctly	Install cold start aid. Check, repair, or replace if necessary.
OK ⬌	
Fuel Filter Plugged	Replace fuel filter.
OK ⬌	
Air in the Fuel System	Check for air in fuel, tighten fuel connections and filter, check fuel tank stand pipe.
OK ⬌	
Fuel Suction Line Restricted	Check fuel line for restrictions.
OK ⬌	
Intake Air System Restricted	Check intake air system for restrictions.
OK ⬌	
Fuel Contaminated	Verify by operating engine from a temporary supply tank.
OK ⬌	
Contact a Cummins Authorized Repair Facility	

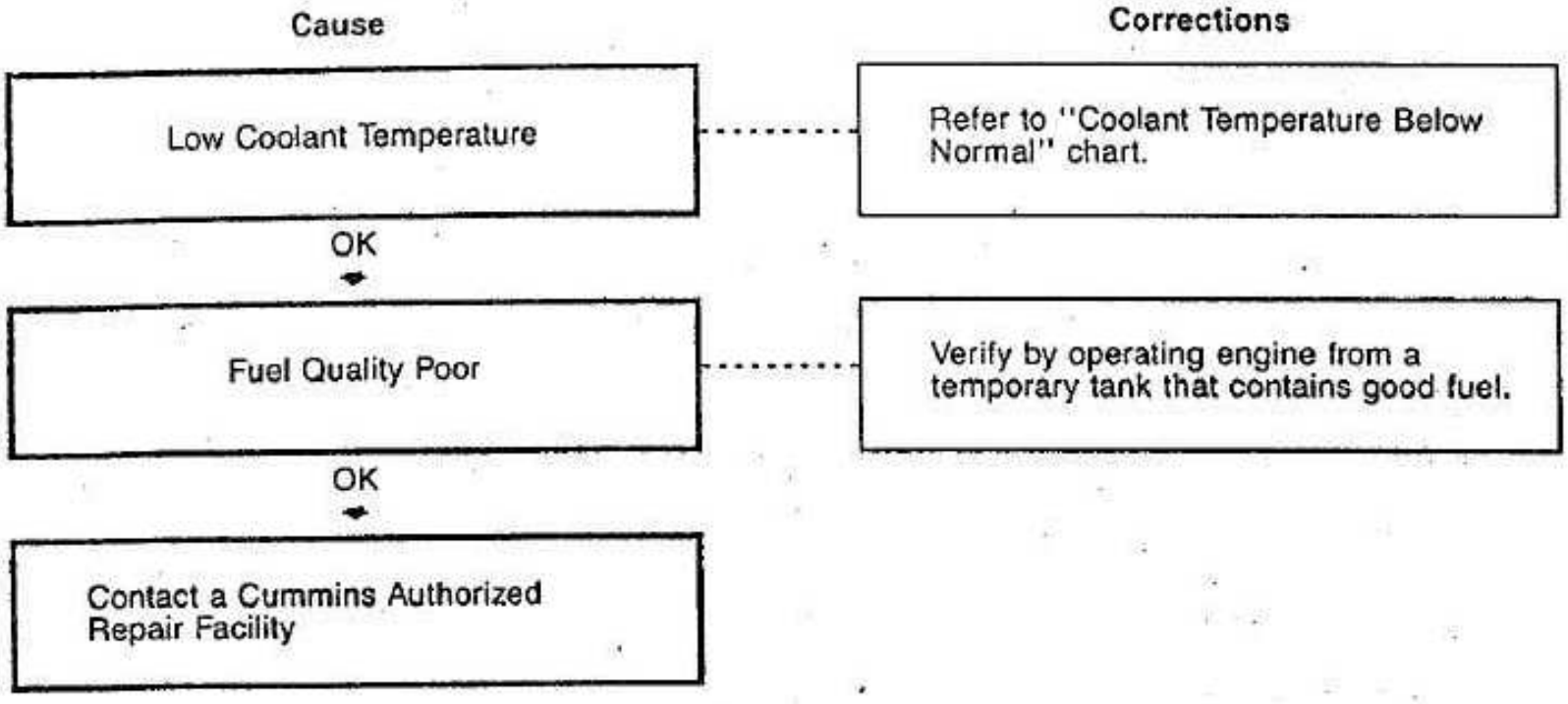
Engine Cranks But Will Not Start (No Smoke From Exhaust)

Cause	Corrections
No Fuel In Tank	Add fuel.
OK ⬇	
Shut-off Valve Closed	Use manual override. Repair electrics.
OK ⬇	
No Fuel To Injectors	Loosen fuel supply line between fuel pump and cylinder head while cranking engine - check for fuel.
OK ⬇	
Fuel Connections Loose On Suction Side Of Fuel Pump	Tighten all fuel filter fittings and connections from fuel tank to fuel pump.
OK ⬇	
Fuel Filter Plugged or Suction Line Restricted	Replace fuel filter. Inspect fuel hose for restriction.
OK ⬇	
No Fuel in Pump	Prime fuel pump.
OK ⬇	
Intake or Exhaust System Restricted	Check intake and exhaust system for restrictions.
OK ⬇	
Contact a Cummins Authorized Repair Facility	

Engine Starts But Will Not Keep Running

Cause	Corrections
Air In The Fuel System	Check for air in fuel, tighten fuel connections, tighten filter, check fuel tank stand pipe.
OK ⬇	
Engine Driven Units Engaged	Disengage engine driven units.
OK ⬇	
Fuel Filter Plugged or Fuel Waxing Due to Cold Weather	Replace fuel filter. Weather conditions can require fuel heater.
OK ⬇	
Fuel Suction Line Restricted	Inspect fuel line for restriction.
OK ⬇	
Fuel Contaminated	Verify by operating engine from a temporary supply tank.
OK ⬇	
Contact a Cummins Authorized Repair Facility	

White Smoke or Rough Running At Idle (After Warmup Period)



Section A - Adjustment, Repair, and Replacement

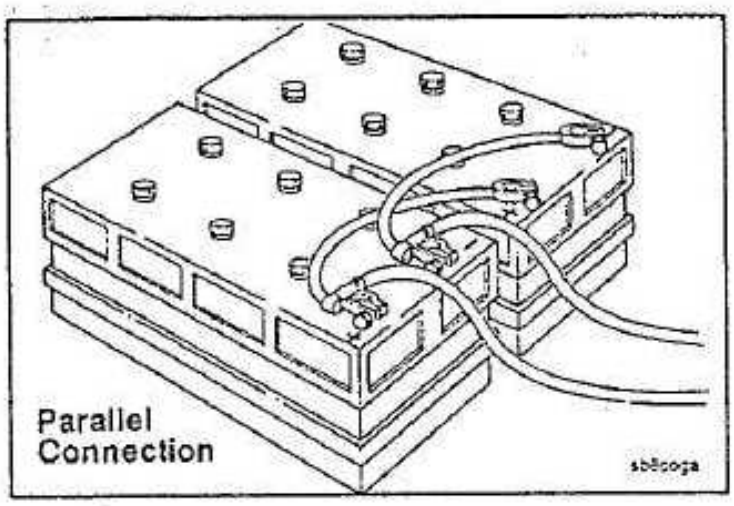
Section Contents

Air Starting Motors

The air starting motor system (tanks, line sizes, and valves) is designed and installed by the original equipment manufacturers and the starting motor suppliers. Refer any questions about the air starting systems to the manufacturer.

Maintenance

- Do **not** operate the air starting motor with air pressure lower than 480 kPa [70 psi].
- Maintain the air starting motor according to the manufacturer's recommendations.
- For maximum efficiency, the hoses, tubes, and lines **must not** leak.
- Refer to the original equipment manufacturers' and starting motor manufacturers' manuals for specific information regarding the starting motors, valves, and systems.

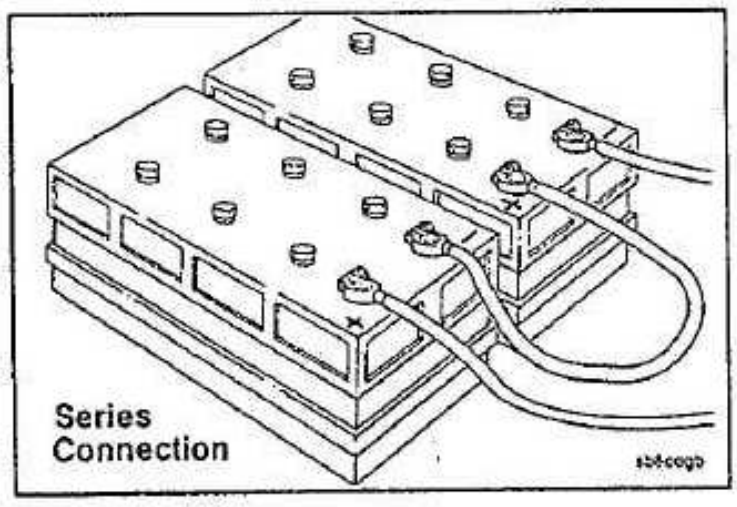


Battery Connections

Parallel and Series Connections

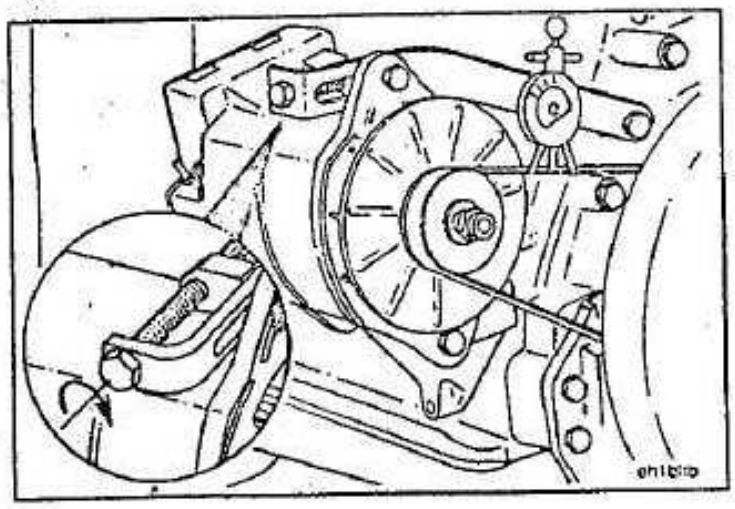
Caution: To avoid electrical shock and potential eye danger when using jumper cables to start the engine, make sure to connect the cables in parallel: positive (+) to positive (+) and negative (-) to negative (-). When using an external electrical source to start the engine, turn the disconnect switch to the OFF position and remove the key before attaching the jumper cables.

The accompanying illustration shows a typical parallel battery connection. This arrangement doubles the cranking amperage.



This illustration shows a typical series battery connection. This arrangement, positive to negative, doubles the voltage.

For optimum electrical system and starting motor performance, keep battery connections clean and tight.

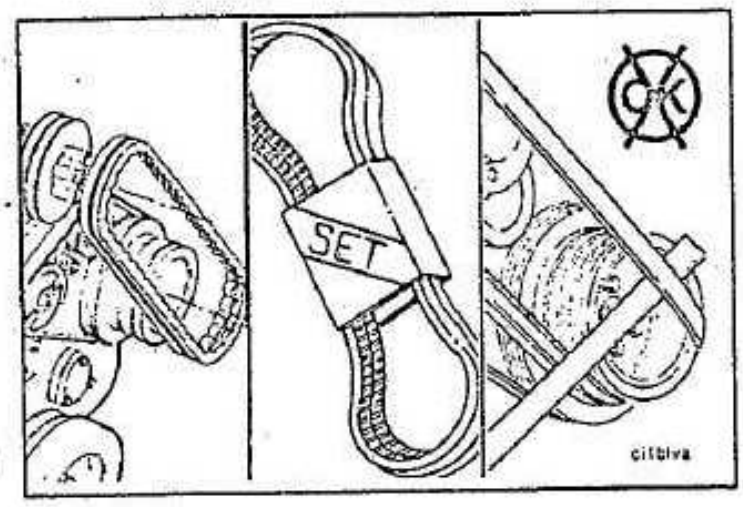


Alternator Drive Belt

Adjustment

- Loosen the adjustment link locking capscrew and alternator pivot bolt.
- Turn the adjusting screw to adjust belt tension. Refer to the Belt Tension Chart in Section V for correct tension value.
- Tighten the adjustment link locking capscrew and alternator pivot bolt.

Torque Value: 80 N•m [60 ft-lb]



Drive Belts

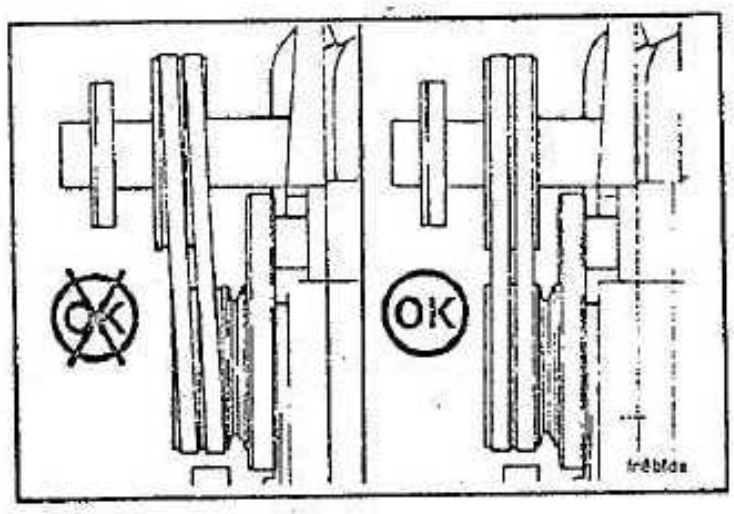
Replacement

NOTE: When a drive uses two or more belts, replace the belts as a complete set.

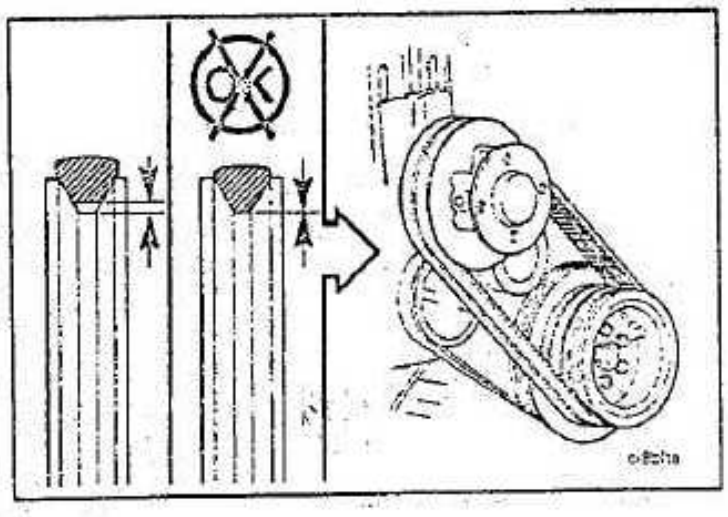
Loosen the adjusting mechanism, and move the pulley centers as close as possible. The belts can then be installed without excessive force.

To prevent damage, do **not** roll a belt over the pulley or pry it on with a tool.

Refer to the Belt Tension Chart in Section V to select the correct gauge and tension value for the belt width.



Pulley misalignment **must not** exceed 6 mm for each meter [1/16-inch for each 12 inches] of distance between the pulley centers.



Belts **must not** touch the bottom of the pulley grooves, nor **must** they protrude over 3 mm [3/32-inch] above the top edge of the groove.

When a drive uses two or more belts, the belt riding depth **must not** vary over 2 mm [1/16-inch] between belts.

Storage for Engines Out of Service

If the engine will be out of service longer than 6 months, take special precautions to prevent rust. Contact the nearest Cummins Authorized Repair Location, or refer to the Engine Shop Manual, Bulletin No. 3379076, for information concerning engine storage procedures.

NOTES

Section V - Specifications and Torque Values

Section Contents

General Specifications

Metric [U.S. Customary]

NOTE: Listed below are general specifications for this engine. Refer to each System Section for additional specifications.

Engine Speed ..... Refer to the engine dataplate for optional speed rating.
Displacement ..... 14.0 liters [855 C.I.D.]
Bore and stroke ..... 140 mm [5.5 in] x 152 mm [6.0 in]
Engine Weight
- Dry ..... 1303 kg [2870 lbs] to 1330 kg [2930 lbs]
- Wet ..... 1348 kg [2970 lbs] to 1376 kg [3030 lbs]

Firing order 1-5-3-6-2-4
Valve and injector settings:
- Intake valve adjustment ..... 0.28 mm [0.0 in]
- Intake valve limits ..... 0.15 to 0.41 mm [0.006 to 0.016 in]
- Exhaust valve adjustment ..... 0.58 mm [0.023 in]
- Exhaust valve limits ..... 0.46 to 0.76 mm [0.018 to 0.030 in]
- Top Stop injector adjustment (in engine) ..... 0.6 to 0.7 N•m [5 to 6 in-lb]
- Top Stop injector recheck limits ..... 0.00 to 0.05 mm [0.000 to 0.002 in lash]
- STC Top Stop injector adjustment (in engine) ..... 0.6 to 0.7 N•m [5 to 6 in-lb]
- STC Top Stop injector recheck limits ..... 0.00 to 0.05 mm [0.000 to 0.002 in lash]

Fuel System

NOTE: For performance and fuel rate values, refer to the engine data sheet, or the fuel pump code for the particular model involved.

Maximum Allowable Restriction to Pump:

- With Clean Filter ..... 100 mm Hg [4 in Hg]
- With Dirty Filter ..... 200 mm Hg [8 in Hg]

Maximum Allowable Return Line Restriction ..... 63 mm Hg [2.5 in Hg]

Maximum Allowable Return Line Restriction with Check Valves and/or Overhead Tanks ..... 165 mm Hg [6.5 in Hg]

Minimum Allowable Fuel Tank Vent Capability ..... 0.85 m^3/h [30 ft^3/hr]

Lubricating Oil System

Oil Pressure

Oil Pressure, Main Oil Rifle (15W40 oil at 107°C [225°F]:
At idle (minimum allowable) ..... 70 kPa [10 psi]
At no load governed speed ..... 240 to 310 kPa [35 to 45 psi]

Oil Filter Capacity

Bypass filter (spin-on) (LF777) ..... 2.65 liters [0.7 U.S. gal]
Full flow filter (spin-on) (LF670) ..... 2.65 liters [0.7 U.S. gal]
Combination filter (LF3000) ..... 2.65 liters [0.7 U.S. gal]

Oil Pan Capacity:

- G-Drive ..... 28.4 to 36 liters [7.5 to 9.5 U.S. gal.]
- Other applications ..... 26 to 34 liters [7.0 to 9.0 U.S. gal.]

Total System Capacity

Total system capacity is the summation of the oil pan capacity at the high mark on the dipstick, the full flow oil filter capacity, and the capacity of any bypass filters that are used.

Cooling System

Coolant capacity (Engine only)
- NTA855 ..... 21 liters [22 U.S. qts.]
- NT855 ..... 19 liters [20 U.S. qts.]

Standard modulating thermostat-range ..... 79° to 91°C [175° to 195°F]

Maximum coolant pressure (pressure cap removed) ..... 241 kPa [35 psi]

Maximum allowable top tank temperature ..... 95°C [203°F]

Minimum recommended top tank temperature
- Construction/Industrial ..... 100°C [212°F]
- G-Drive ..... 104°C [220°F]

Maximum allowable deaeration time ..... 25 minutes

Minimum allowable drawdown or 20% of system capacity (whichever is greater) ..... 10.4 liters [11 U.S. qts.]

Minimum allowable pressure cap ..... 48 kPa [7 psi]

Air Intake System

NOTE: Engine intake air **must** be filtered to prevent dirt and debris from entering the engine. If intake air piping is damaged or loose, unfiltered air will enter the engine and cause premature wear.

Metric [U.S. Customary]

Maximum Intake restriction:
- Clean air filter element
  - Normal duty air cleaner ..... 254 mm H_2O [10.0 in H_2O]
  - Heavy duty air cleaner ..... 381 mm H_2O [15.0 in H_2O]
- Dirty air filter element ..... 635 mm H_2O [25.0 in H_2O]

Exhaust System

Maximum back pressure ..... 75 mm Hg [3.0 in Hg]

Normal exhaust pipe diameter ..... 127 mm [5 inches]

Electrical System

Minimum battery capacity @ -18 to 0°C [0 to 32°F] ambient temperature
- 12-volt starter 400 ampere hour ..... 1800 cold cranking amps @ -18°C [0°F]
- 24-volt starter 200 ampere hour ..... 900 cold cranking amps @ -18°C [0°F]

Minimum battery capacity above 0°C [32°F] ambient temperature
- 12-volt starter 300 ampere hour ..... 1280 cold cranking amps @ -18°C [0°F]
- 24-volt starter 150 ampere hour ..... 640 cold cranking amps @ -18°C [0°F]

Maximum starting circuit resistance
- 12-volt starter ..... 0.00075 ohms
- 24-volt starter ..... 0.00200 ohms

Battery cable sizes - American wire gauge (Maximum length in cranking motor circuit)

12-volt
- No. 00 ..... 3.7 meters [12 ft]
- No. 000 ..... 4.9 meters [16 ft]
- No. 0000 or two No. 0* ..... 6.1 meters [20 ft]
- Two No. 00 ..... 7.6 meters [ft]

12-volt High Output
- No. 00 ..... 2.1 meters [7 ft]
- No. 000 ..... 2.7 meters [9 ft]
- No. 0000 or two No. 0* ..... 3.7 meters [12 ft]
- Two No. 00 ..... 4.3 meters [14 ft]

24 to 32-volt
- No. 00 ..... 6.1 meters [20 ft]
- No. 000 ..... 8.2 meters [27 ft]
- No. 0000 or two No. 0* ..... 10.7 meters [35 ft]
- Two No. 00 ..... 13.7 meters [45 ft]

Minimum ambient temperature without starting aid ..... Refer to engine data sheet.

Minimum cranking speed without starting aid ..... 100 RPM

* Two strands of No. 0 cable can be used in place of one No. 0000 cable providing all connections are carefully made to ensure equal current flow in each parallel cable.

Minimum Recommended Battery Capacity

System Voltage	Ambient Temperature -18°C [0°F]		Ambient Temperature 0°C [32°F]	
	Cold Cranking Amperes	Reserve Capacity* Amperes	Cold Cranking Amperes	Reserve Capacity* Amperes
12 Volt	1800	640	1280	480
24 Volt**	900	320	640	240

Note: The number of plates within a given battery size determines reserve capacity. Reserve capacity determines the length of time sustained cranking can occur.

** CCA ratings are based on two, 12 volt batteries in series.

Batteries (Specific Gravity)

Battery State of Charge	Specific Gravity @ 27°C [80°F]
100%	1.260-1.280
75%	1.230-1.250
50%	1.200-1.190
25%	1.170-1.190
Discharged	1.110-1.130

Fuel Recommendations/Specifications

Warning: Do NOT mix gasoline or alcohol with diesel fuel. This mixture can cause an explosion.

Cummins Engine Company, Inc. recommends the use of ASTM No. 2 D fuel. The use of No. 2 diesel fuel will result in optimum engine performance. At operating temperatures below 0°C [32°F], acceptable performance can be obtained by using blends of No. 2 D and No. 1 D. The use of lighter fuels can reduce fuel economy.

The viscosity of the fuel **must** be kept above 1.3 cSt at 100°C [212°F] to provide adequate fuel system lubrication.

For a more detailed description of fuel properties, refer to Fuel For Cummins Engines, Bulletin No. 3379001. See ordering information in the back of this manual.

Lubricating Oil Recommendations/Specifications

The use of high quality engine lubricating oils combined with appropriate oil drain and filter change intervals is a critical factor in maintaining engine performance and obtaining maximum engine life.

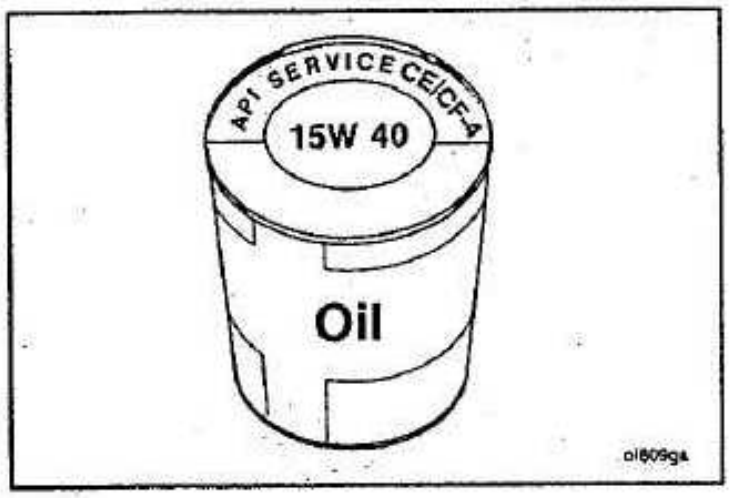
Cummins Engine Company, Inc. strongly recommends the use of a high quality SAE 15W-40 heavy duty engine oil (such as Cummins Premium Blue) which meets the American Petroleum Institute (API) performance classification CE or CF-4.

NOTE: CD or CD/SF engine oils can be used in areas where CE and CF-4 oil is **not** yet available.

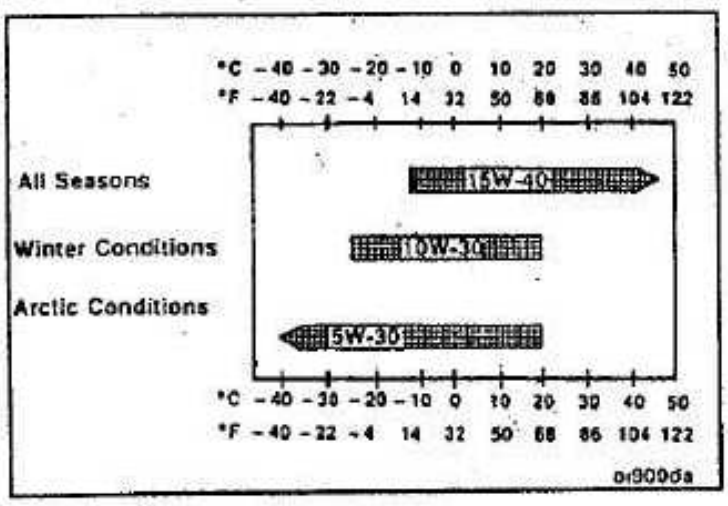
A sulfated ash content of 1.0 mass percent will yield optimal control of valve and piston deposit and will minimize oil consumption. The sulfated ash **must not** exceed 1.85 percent mass.

For further details and discussion of engine lubricating oils for Cummins engines, refer to Bulletin No. 3810340, Cummins Engine Oil Recommendations, and Bulletin No. 3810375, Use of CE Engine Oils in Cummins Engines.

Additional information regarding lubricating oil availability throughout the world is available in the E M.A. Lubricating Oils Data Book for Heavy Duty Automotive and Industrial Engines. The data book c be ordered from the Engine Manufacturers Association, One Illinois Center, 111 East Wacker Drive, Chicago, IL U.S.A. 60601. The telephone number is: (312) 644-6610.



The API service symbols are shown in the accompanying illustration. The upper half of the symbol displays the appropriate oil categories; the lower half can contain words to describe oil energy conserving features. The center section identifies the SAE oil viscosity grade.



Caution: The use of low viscosity oils, such as 10W or 10W-30, can be used to aid in starting the engine and in providing sufficient oil flow at ambient temperatures below -5°C [23°F]. Continuous use of low viscosity oils can decrease engine life due to wear.

Division and Regional Offices

NOTE: The following list contains offices in U.S., Canada, Australia, New Zealand, and Puerto Rico.

United States

Northern Division Office

Cummins Engine Company, Inc.
21 Southpark Blvd.
Greenwood, IN 46143
Telephone: (317) 885-4400

Southern Division Office

Cummins Engine Company, Inc.
425 Franklin Road
Suite 500
Marietta, GA 30067
Telephone: (404) 423-1108

Western Division Office

Cummins Engine Company, Inc.
5660 Greenwood Plaza Blvd.
Englewood, CO 80111
Telephone: (303) 773-2866

Western Regional Office

Cummins Engine Company, Inc.
569 First Street West
Sonoma, CA 95476
Telephone: (707) 935-3842

Plains Regional Office

Cummins Engine Company, Inc.
1901 Central Drive
Suite 356
Bedford, TX 76021
Telephone: (817) 267-3172

Canada

Canadian Division Office

Cummins Diesel of Canada, Ltd.
700 Dorval Drive
Suite 600
Oakville, Ontario L6K 3V3
Telephone: (416) 842-8070

Western Canada Regional Office

Cummins Diesel of Canada, Ltd.
18452 - 96th Avenue
Surrey, B.C. V4N 3P8
Telephone: (604) 882-5727

Eastern Canada Regional Office

Cummins Diesel of Canada Ltd.
800 Montee DeLiesse
Saint Laurent, Quebec H4T 1P3
Telephone: (514) 342-4042

Central Canada Regional Office

Cummins Diesel of Canada Ltd.
14755 - 121 A Avenue
Edmonton, Alberta T5L 2T2
Telephone: (403) 455-2151

Australia Regional Office

Cummins Diesel Australia

2 Caribbean Drive
Scoresby, Victoria 3179
Australia
Telephone: (61) 3-765-3222

NOTE: This office also serves New Zealand.

Cummins Americas Regional Office

Cummins Caribbean

16085 N. W. 52nd Avenue
Hialeah, FL 33014
Telephone: (305) 621-1300

NOTE: This office serves Puerto Rico and South America excluding Brazil.

Distributors and Branches - United States

Alabama

Birmingham Distributor

Cummins Alabama, Inc.
2200 Pinson Highway
P.O. Box 1147
Birmingham, AL 35201
Telephone: (205) 841-0421

Mobile Branch

Cummins Alabama, Inc.
1924 Beltline Highway,
I-65 North
P.O. Box 2566
Mobile, AL 36601
Telephone: (205) 456-2236

Mobile Onan/Marine Branch

Cummins Alabama, Inc.
Cummins/Onan/Power Systems Center
3422 Georgia Pacific Avenue
Mobile, AL 36617
Telephone: (205) 452-6426

Montgomery Branch

Cummins Alabama, Inc.
2325 West Fairview Avenue
P.O. Box 9271
Montgomery, AL 36108
Telephone: (205) 263-2594

Alaska

Anchorage - (Branch of Seattle)

Cummins Northwest, Inc.
2618 Commercial Drive
Anchorage, AK 99501-3095
Telephone: (907) 279-7594

Arizona

Phoenix Distributor and Branch

Cummins Southwest, Inc.
2222 North Black Canyon Hwy.
P.O. Box 6688
Phoenix, AZ 85005-6688
Telephone: (602) 252-8021

Phoenix Generator Branch

Cummins Southwest, Inc.
Power Systems Division
2222 N. 23rd Drive
Phoenix, AZ 85009
Telephone: (602) 252-8021

Tucson Branch

Cummins Southwest, Inc.
1912 West Prince Road
Tucson, AZ 85705
Telephone: (602) 887-7440

Arkansas

Little Rock - (Branch of Memphis)

Cummins Mid-South, Inc.
6600 Interstate 30
Little Rock, AR 72209
Telephone: (Sales): (501) 569-5600
(Service): (501) 569-5656
(Parts): (501) 569-5613

California

San Leandro Distributor

Cummins West, Inc.
1601 Aurora Drive
San Leandro, CA 94577
Telephone: (510) 351-6101

Bakersfield Branch

Cummins West, Inc.
301 East Fourth Street
Bakersfield, CA 93307
Telephone: (805) 325-9404

Hayward Distribution Center

Cummins West, Inc.
788 Sandoval Way
Hayward, CA 94544
Telephone: (510) 351-6101

Los Angeles Distributor

Cummins Cal Pacific Inc.
1939 Deere Avenue (Irvine)
Irvine, CA 92714
Telephone: (714) 756-8700

Montebello Branch

Cummins Cal Pacific Inc.
1105 South Greenwood Avenue
Montebello, CA 90640
Telephone: (213) 728-8111

Rialto Branch

Cummins Cal Pacific Inc.
3061 S. Riverside Avenue
Rialto, CA 92377
Telephone: (909) 877-0433

San Diego Branch

Cummins Cal Pacific Inc.
310 N. Johnson Avenue
El Cajon, CA 92020
Telephone: (619) 593-3093

San Leandro Branch

Cummins West, Inc.
1601 Aurora Drive
San Leandro, CA 94577
Telephone: (510) 351-6101

West Sacramento Branch

Cummins West, Inc.
2661 Evergreen Avenue
West Sacramento, CA 95691
Telephone: (916) 371-0630

Colorado

Denver Distributor

Cummins Power, Inc.
5100 East 58th Avenue
Commerce City, CO 80022
Telephone: (303) 287-0201

Denver Generator Branch

Gen Power, Inc.
5720 Holly Street
Unit A
Commerce City, CO 80022
Telephone: (303) 286-7697

Grand Junction Branch

Cummins Power, Inc.
2380 U.S. Highway 6 & 50
P.O. Box 339
Grand Junction, CO 81501
Telephone: (303) 242-5776

Greeley Branch

Cummins Power, Inc.
250 Sixth Avenue
Greeley, CO 80631
Telephone: (303) 351-0448

Connecticut

Hartford Distributor

Cummins - Connecticut, Inc.
260 Murphy Road
Hartford, CT 06114
Telephone: (203) 527-9156
Parts: (203) 525-5606

Florida

Tampa Distributor

Cummins Southeastern Power, Inc.
Corporate Office
5421 N. 59th Street
Tampa, FL 33610
Telephone: (813) 621-7202

Ft. Myers Branch

Cummins Southeastern Power, Inc.
2671 Edison Avenue, Unit #3
Ft. Myers, FL 33916
Telephone: (813) 337-1211

Jacksonville Branch

Cummins Southeastern Power, Inc.
2060 West 21st Street
P.O. Box 12036
Jacksonville, FL 32209
Telephone: (904) 355-3437

Miami Branch

Cummins Southeastern Power, Inc.
9900 N.W. 77th Court
Hialeah Gardens, FL 33016
Telephone: (305) 821-4200

Orlando Branch

Cummins Southeastern Power, Inc.
4020 North
Orange Blossom Trail
Orlando, FL 32810
Telephone: (407) 298-2080

Tampa Branch

Cummins Southeastern Power, Inc.
5910 E. Hillsborough Avenue
P. O. Box 11737
Tampa, FL 33680
Telephone: (813) 626-1101

Georgia

Atlanta Distributor

Cummins South, Inc.
5125 Georgia Highway 85
College Park, GA 30349
Telephone: (404) 763-0151

Albany Branch

Cummins South, Inc.
1915 W. Oakridge Drive
Albany, GA 31707-4938
Telephone: (912) 888-6210

Atlanta Branch

Cummins South, Inc.
100 University Avenue, S.W.
Atlanta, GA 30315-2202
Telephone: (404) 527-7800

Augusta Branch

Cummins South, Inc.
1255 New Savannah Road
Augusta, GA 30901-3891
Telephone: (706) 722-8825

Dalton Branch

Cummins South, Inc.
204 Carbondale Road
Dalton, GA 30720-5303
Telephone: (706) 277-1144

Savannah Branch

Cummins South, Inc.
8 Interchange Court
Savannah, GA 31401-1627
Telephone: (912) 232-5565

Hawaii

Honolulu Distributor

Cummins Hawaii Diesel Power, Inc.
215 Puuhale Road
Honolulu, HI 96819-2235
Telephone: (808) 845-6606

Idaho

Boise - (Branch of Salt Lake City)

Cummins Intermountain, Inc.
9851 Federal Way
P.O. Box 5212
Boise, ID 83705
Telephone: (208) 336-5000

Pocatello - (Branch of Salt Lake City)

Cummins Intermountain, Inc.
14299 Highway 30 West
Pocatello, ID 83201
Telephone: (208) 234-1661

Illinois

Chicago Distributor

Cummins Northern Illinois, Inc.
7145 Santa Fe Drive
Hodgkins, IL 60525
Telephone: (708) 579-9222

Bloomington-Normal - (Branch of Indianapolis)

Cummins Mid-States Power, Inc.
P.O. Box 348
(at U.S. 51 N and I-55)
Bloomington-Normal, IL 61701
Telephone: (309) 452-4454

Harrisburg (Branch of St. Louis)

Cummins Gateway, Inc.
Rt. 4, Box 629
Harrisburg, IL 62946
Telephone: (618) 273-4138

Rock Island - (Branch of Omaha)

Cummins Great Plains Diesel, Inc.
7820-42nd Street West
Rock Island, IL 61204
Telephone: (309) 787-4300

Rockford Branch

Cummins Northern Illinois, Inc.
4617 Sandy Hollow Road
Rockford, IL 61109
Telephone: (815) 874-1700

Indiana

Indianapolis Distributor

Cummins Mid-States Power, Inc.
P.O. Box 42917
2421 Production Drive
Indianapolis, IN 46242-917
Telephone: (317) 243-7979

Evansville - (Branch of Louisville)

Cummins Cumberland, Inc.
7901 Highway 41 N.
Evansville, IN 47711
Telephone: (812) 867-4400

Ft. Wayne Branch

Cummins Mid-States Power, Inc.
3415 Coliseum Blvd. West
(At Jct. I-69 & 30/33)
Ft. Wayne, IN 46808
Telephone: (219) 482-3691

Gary - (Branch of Chicago)

Cummins Northern Illinois, Inc.
1440 Texas Street
Gary, IN 46402
Telephone: (219) 885-5591

Indianapolis Branch

Cummins Mid-States Power, Inc.
P. O. Box 42917
3621 West Morris Street
Indianapolis, IN 46242-917
Telephone: (317) 244-7251

Linton Branch

Cummins Mid-States Power, Inc.
1244 N.E. A Street
(Indiana Highway 54 East)
Linton, IN 47441-0678
Telephone: (812) 847-2201 and
(812) 847-2202

Zionsville Branch

Cummins-Onan Power, Inc.
5005 West 106th Street
P.O. Box 668
Zionsville, IN 46077
Telephone: (317) 873-5005

Iowa

Cedar Rapids - (Branch of Omaha)

Cummins Great Plains Diesel, Inc.
625 - 33rd Avenue SW
P.O. Box 1107
Cedar Rapids, IA 52406
Telephone: (319) 366-7537 (24 hours)

Des Moines - (Branch of Omaha)

Cummins Great Plains Diesel, Inc.
1680 N.E. 51st Avenue
P.O. Box B
Des Moines, IA 50313
Telephone: (515) 262-9591
Parts: (515) 262-9744
(515) 262-9591 after midnight

Des Moines - (Branch of Omaha)

Midwestern Power Products
Division of Cummins Great Plains
Diesel, Inc.
10100 Dennis Drive
Des Moines, IA 50322
Telephone: (515) 278-5521

Kansas

Colby - (Branch of Kansas City, Missouri)

Cummins Mid-America, Inc.
1880 South Range
Colby, KS 67701
Telephone: (913) 462-3945
(913) 462-3143

Garden City - (Branch of Kansas City, Missouri)

Cummins Mid-America, Inc.
2008 West Mary
Garden City, KS 67846
Telephone: (316) 275-2277

Wichita - (Branch of Kansas City, Missouri)

Cummins Mid-America, Inc.
5101 North Broadway
Wichita, KS 67219
Telephone: (316) 838-0875

Springfield Branch

Cummins Mid-America, Inc.
3637 East Kearney
Springfield, MO 65803
Telephone: (417) 862-0777

St. Louis Distributor

Cummins Gateway, Inc.
7210 Hall Street
St. Louis, MO 63147
Telephone: (314) 389-5400

Columbia Branch

Cummins Gateway, Inc.
5221 Highway 763 North
Columbia, MO 65202-1028
Telephone: (314) 449-3711

Sikeston Branch

Cummins Gateway, Inc.
101 Keystone Drive
Sikeston, MO 63801
Telephone: (314) 472-0303

Montana

Billings - (Branch of Denver)

Cummins Power, Inc.
5151 Midland Road
P.O. Box 30377
Billings, MT 59101
Telephone: (406) 245-4194

Great Falls - (Branch of Denver)

Cummins Power, Inc.
415 Vaughn Road (59404)
P.O. Box 1199
Great Falls, MT 59403
Telephone: (406) 452-8561

Missoula - (Branch of Seattle)

Cummins Northwest, Inc.
4950 North Reserve Street
Missoula, MT 59802-1498
Telephone: (406) 728-1300

Nebraska

Omaha Distributor and Branch

Cummins Great Plains Diesel, Inc.
5515 Center Street
P.O. Box 6068
Omaha, NE 68106
Telephone: (402) 551-7678 (24 hours) or
(402) 493-4656

Kearney Branch

Cummins Great Plains Diesel, Inc.
515 Central Avenue
P.O. Box 1326
Kearney, NE 68847
Telephone: (308) 234-1994

Nevada

Elko - (Branch of Salt Lake City)

Cummins Intermountain, Inc.
5370 East Idaho Street
Elko, NV 89801
Telephone: (702) 738-6405

Las Vegas - (Branch of Salt Lake City)

Cummins Intermountain, Inc.
2750 Losee Road
North Las Vegas, NV 89036
Telephone: (702) 399-2339
(Mailing Address:)
P. O. Box 3997
North Las Vegas, NV 89036-3998

Sparks - (Branch of Salt Lake City)

Cummins Intermountain, Inc.
150 Glendale Avenue
Sparks, NV 89431
Telephone: (702) 331-4983

New Jersey

Newark - (Branch of Bronx)

Cummins Metropower, Inc.
Routes U.S. 1 & 22
Newark, NJ 07114
Telephone: (201) 242-2255

New Mexico

Albuquerque - (Branch of Phoenix)

Cummins Southwest, Inc.
1921 Broadway N.E.
Albuquerque, NM 87102
Telephone: (505) 247-2441

Farmington - (Branch of Phoenix)

Cummins Southwest, Inc.
1101 North Troy King Road
Farmington, NM 87401
Telephone: (505) 327-7331

New York

Bronx Distributor

Cummins Metropower, Inc.
890 Zerega Avenue
Bronx, NY 10473
Telephone: (718) 892-2400

Albany - (Branch of Boston)

Cummins Northeast, Inc.
101 Railroad Avenue
Albany, NY 12205
Telephone: (518) 459-1710

Buffalo - (Branch of Boston)

Cummins Northeast, Inc.
480 Lawrence Bell Dr.
Williamsville, NY 14221-7090
Telephone: (716) 631-3211

Syracuse - (Branch of Boston)

Cummins Northeast, Inc.
29 Eastern Avenue
Syracuse, NY 13211
Telephone: (315) 437-2751

North Carolina

Charlotte Distributor

Cummins Atlantic, Inc.
11101 Nations Ford Road
P.O. Box 240729
Charlotte, NC 28224-0729
Telephone: (704) 588-1240

Charlotte Branch

Cummins Atlantic, Inc.
3700 North Interstate 85
Charlotte, NC 28206
Telephone: (704) 596-7690

Greensboro Branch

Cummins Atlantic, Inc.
513 Preddy Boulevard
P.O. Box 22066
Greensboro, NC 27420-2066
Telephone: (919) 275-4531

Wilson Branch

Cummins Atlantic, Inc.
1514 Cargill Avenue
P.O. Box 1177
Wilson, NC 27894-1117
Telephone: (919) 237-9111

North Dakota

Fargo - (Branch of St. Paul)

Cummins Diesel Sales, Inc.
4050 West Main Avenue (58103)
P.O. Box 2111
Fargo, ND 58107
Telephone: (701) 282-2466

Grand Forks - (Branch of St. Paul)

Cummins Diesel Sales, Inc.
4728 Gateway Drive
P.O. Box 636
Grand Forks, ND 58201
Telephone: (701) 775-8197
(701) 772-7689 after 12:30 a.m.

Minot - (Branch of St. Paul)

Cummins Diesel Sales, Inc.
1501 - 20th Avenue, S.W.
P.O. Box 1179
Minot, ND 58702
Telephone: (701) 852-3585
(701) 839-3417 after 12:30 a.m.

Ohio

Columbus Distributor and Branch

Cummins Ohio, Inc.
4000 Lyman Drive
Hilliard (Columbus), OH 43026
Telephone: (614) 771-1000

Akron Branch

Cummins Ohio, Inc.
1033 Kelly Avenue
Akron, OH 44306
Telephone: (216) 773-7821

Cincinnati Branch

Cummins Ohio, Inc.
10470 Evendale Drive
Cincinnati, OH 45241
Telephone: (513) 563-6670

Cincinnati Branch

Cummins Ohio, Inc.
Power Systems Division
10660 Evendale Drive
Cincinnati, OH 45241
Telephone: (513) 563-9303

Cleveland Branch

Cummins Ohio, Inc.
7585 Northfield Road
Cleveland, OH 44146
Telephone: (216) 439-6800

Lima Branch

Cummins Ohio, Inc.
960 Broadway
Lima, OH 45804
Telephone: (419) 227-2641

Strasburg Branch

Cummins Ohio, Inc.
777 South Wooster Avenue
Box 136
Strasburg, OH 44680
Telephone: (216) 878-5511
After hours: (216) 364-1433

Toledo Branch

Cummins Ohio, Inc.
801 Illinois Avenue
Maumee
(Toledo), OH 43537
Telephone: (419) 893-8711

Youngstown Branch

Cummins Ohio, Inc.
7145 Masury Road
Hubbard
(Youngstown), OH 44425
Telephone: (216) 534-1935

Oklahoma

Duncan - (Branch of Arlington)

Cummins Southern Plains, Inc.
1400 East Bois D'Arc
P.O. Box 310
Duncan, OK 73534-0310
Telephone: (405) 255-1414 (24 hours)

Oklahoma City - (Branch of Arlington)

Cummins Southern Plains, Inc.
5800 West Reno
P.O. Box 1636
Oklahoma City, OK 73101-1636
Telephone: (405) 946-4481 (24 hours)

Tulsa - (Branch of Arlington)

Cummins Southern Plains, Inc.
9725 E. Admiral Place
P.O. Box 471616
Tulsa, OK 74116-2527
Telephone: (918) 838-2555 (24 hours)

Oregon

Bend - (Branch of Seattle)

Cummins Northwest, Inc.
3500 N. Highway 97 (97701-5729)
P.O. Box 309
Bend, OR 97709-0309
Telephone: (503) 389-1900

Coburg/Eugene - (Branch of Seattle)

Cummins Northwest, Inc.
91201 Industrial Parkway
Coburg, OR 97401

(Mailing Address)
P.O. Box 10877
Eugene, OR 97440-2887
Telephone: (503) 687-0000

Medford - (Branch of Seattle)

Cummins Northwest, Inc.
4045 Crater Lake Highway
Medford, OR 97504-9796
Telephone: (503) 779-0151

Pendleton - (Branch of Seattle)

Cummins Northwest, Inc.
223 S.W. 23rd Street
Pendleton, OR 97801-1810
Telephone: (503) 276-2561

Portland - (Corporate Branch of Seattle)

Cummins Northwest, Inc.
4711 N. Basin Avenue
P. O. Box 2710 (97208-2710)
Portland, OR 97217-3557
Telephone: (503) 289-0900

Portland - (Branch of Seattle)

Cummins Northwest, Inc.
4711 N. Basin Avenue
P. O. Box 2710 (97208-2710)
Portland, OR 97217-3557
Telephone: (503) 289-0900

Pennsylvania

Philadelphia Distributor

Cummins Diesel Engines, Inc.
2727 Ford Road
Bristol, PA 19007-6895
Telephone: (215) 785-6005

Bristol Onan Branch

Keystone Onan Power, Inc.
2727 Ford Road
Bristol, PA 19007-6895
Telephone: (215) 785-6005

Clearfield Branch

Cummins Diesel Engines, Inc.
Clearfield Parts Center
501 Williams Street
Clearfield, PA 16830
Telephone: (814) 765-2421

Harrisburg Branch

Cummins Diesel Engines, Inc.
4499 Lewis Road
Harrisburg, PA 17111
Telephone: (717) 564-1344

Harrisburg Onan Branch

Keystone Onan Power, Inc.
1549 Bobali Drive
Harrisburg, PA 17104-3208
Telephone: (717) 986-9126

Monroeville Branch

Cummins Diesel Engines, Inc.
2740 Mosside Boulevard
Monroeville, PA 15146
Telephone: (412) 856-6700

Puerto Rico

Catano

Cummins Diesel Power, Inc.
Calle C #31 El Matadero
Puerto Nuevo, Puerto Rico 00920
Telephone: (809) 793-0300

South Carolina

Charleston - (Branch of Charlotte)

Cummins Atlantic, Inc.
3028 West Montague Avenue
Charleston, SC 29418-5593
Telephone: (803) 554-5112

Charleston - (Onan Branch of Charlotte)

Cummins Atlantic, Inc.
Atlantic Power Generation
3028 West Montague Avenue
Charleston, SC 29418
Telephone: (803) 554-9804

Columbia - (Branch of Charlotte)

Cummins Atlantic, Inc.
1233 Bluff Road
P.O. Box 13543
Columbia, SC 29201-3543
Telephone: (803) 799-2410

South Dakota

Sioux Falls - (Branch of Omaha)

Cummins Great Plains Diesel, Inc.
701 East 54th Street North
Sioux Falls, SD 57104
Telephone: (605) 336-1715
(605) 334-6492

Tennessee

Memphis Distributor & Distribution Center

Cummins Mid-South, Inc.
666 Riverside Drive
P.O. Box 3080
Memphis, TN 38103
Telephone: (901) 577-0666

Chattanooga - (Branch of Atlanta)

Cummins South, Inc.
1509 East 26th Street
Chattanooga, TN 37407-1095
Telephone: (615) 629-1447

Knoxville - (Branch of Louisville)

Cummins Cumberland, Inc.
1211 Ault Road
Knoxville, TN 37914
Telephone: (615) 523-0446

Memphis Branch

Cummins Mid-South, Inc.
1784 E. Brooks Road
Memphis, TN 38116
Telephone:
Sales/Admin.: (901) 345-7424
Parts: (901) 345-1784
Service: (901) 345-6185

Nashville - (Branch of Louisville)

Cummins Cumberland, Inc.
706 Spence Lane
Nashville, TN 37217
Telephone: (615) 366-4341

Texas

Arlington Distributor

Cummins Southern Plains, Inc.
600 N. Watson Road
P.O. Box 90027
Arlington, TX 76004-3027
Telephone: (817) 640-6801 (24 hours)

Amarillo Branch

Cummins Southern Plains, Inc.
5224 Interstate 40 -
Expressway East
P.O. Box 31570
Amarillo, TX 79120-1570
Telephone: (806) 373-3793 (24 hours)

Corpus Christi Branch

Cummins Southern Plains, Inc.
1302 Corn Products Road
P.O. Box 48
Corpus Christi, TX 78403-0048
Telephone: (512) 289-0700 (24 hours)

Dallas Branch

Cummins Southern Plains, Inc.
3707 Irving Boulevard
Dallas, TX 75247
Telephone: (214) 631-6400 (24 hours)

El Paso - (Branch of Phoenix)

Cummins Southwest, Inc.
14333 Gateway West
El Paso, TX 79927
Telephone: (915) 852-4200

Fort Worth Branch

Cummins Southern Plains, Inc.
3250 North Freeway
Fort Worth, TX 76111
Telephone: (817) 624-2107 (24 hours)

Houston Branch

Cummins Southern Plains, Inc.
4750 Homestead Road
P.O. Box 1367
Houston, TX 77251-1367
Telephone: (713) 675-7421 (24 hours)

Mesquite Branch

Cummins Southern Plains, Inc.
2615 Big Town Blvd.
Mesquite, TX 75150
Telephone: (214) 321-5555 (24 hours)

Odessa Branch

Cummins Southern Plains, Inc.
1210 South Grandview
P.O. Box 633
Odessa, TX 79760-0633
Telephone: (915) 332-9121 (24 hours)

San Antonio Branch

Cummins Southern Plains, Inc.
6226 Pan Am Expressway North
P.O. Box 18385
San Antonio, TX 78218-0385
Telephone: (512) 655-5420 (24 hours)

Utah

Salt Lake City Distributor

Cummins Intermountain, Inc.
1030 South 300 West
P.O. Box 25428
Salt Lake City, UT 84125
Telephone: (801) 355-6500

Vernal Branch

Cummins Intermountain, Inc.
1435 East 335 South
P.O. Box 903
Vernal, UT 84078
Telephone: (801) 789-5732

Virginia

Bristol - (Branch of Louisville)

Cummins Cumberland, Inc.
400 Stage Coach Road
1-81 at Old Airport Road
Bristol, VA 24201
Telephone: (703) 669-4200

Norfolk - (Branch of Charlotte)

Cummins Atlantic, Inc.
Atlantic Power Generation
1114 Ballentine Blvd.
Norfolk, VA 23504
Telephone: (804) 627-9470

Richmond - (Branch of Charlotte)

Cummins Atlantic, Inc.
3900 Deepwater Terminal Road
Richmond, VA 23234
Telephone: (804) 232-7891

Roanoke - (Branch of Charlotte)

Cummins Atlantic, Inc.
5307 Peters Creek Road
P.O. Box 7237
Roanoke, VA 24019-7237
Telephone: (703) 362-1673

Washington

Seattle Distributor

Cummins Northwest, Inc.
811 S.W. Grady Way (98055-2944)
P.O. Box 9811
Renton, WA 98057-9811
Telephone: (206) 235-3400

Chehalis Branch

Cummins Northwest, Inc.
1200 N.W. Maryland
Chehalis, WA 98532-1813
Telephone: (206) 748-8841

Spokane Branch

Cummins Northwest, Inc.
E. 3904 Trent Avenue (99202-4471)
P.O. Box 2746 -
Terminal Annex
Spokane, WA 99220-2746
Telephone: (509) 534-0411

Tacoma Branch

Cummins Northwest, Inc.
3701 Pacific Highway East
Tacoma, WA 98424-1135
Telephone: (206) 922-2191

Yakima Branch

Cummins Northwest, Inc.
1905 East Central Avenue (98901-3609)
P.O. Box 9129
Yakima, WA 98909-0129
Telephone: (509) 248-9033

West Virginia

Charleston - (Branch of Louisville)

Cummins Cumberland, Inc.
Charleston Ordnance Center
P.O. Box 8456
South Charleston, WV 25303
Telephone: (304) 744-6373

Fairmont - (Branch of Louisville)

Cummins Cumberland, Inc.
South Fairmont Exit, I-79
145 Middletown Road
Fairmont, WV 26554
Telephone: (304) 367-0196

Wisconsin

DePere Distributor

Cummins Great Lakes, Inc.
875 Lawrence Drive

(Mailing Address)
P.O. Box 530
DePere (Green Bay), WI 54115
Telephone: (414) 337-1991

Chippewa Falls Branch

Cummins Great Lakes, Inc.
Route #7
Box Number 88
Chippewa Falls (Eau Claire), WI 54729
Telephone: (715) 832-4329

Distributors and Branches - Australia

Sydney (Lansvale)

Cummins Diesel Sales & Service
P.O. Box 150
Cambramatta, 2166
New South Wales, Australia

Location:
164-170 Hume Highway
Lansvale, 2166, Australia

Telephone: (61-2) 728-6211

Branches:

Adelaide

Cummins Diesel Sales & Service
P.O. Box 108
Blair Athol, 5084
South Australia, Australia

Location:
45-49 Cavan Road
Gepps Cross, 5094

Telephone: (61-8) 262-5211

Brisbane

Cummins Diesel Sales & Service
P.O. Box 124
Darra, 4076
Queensland, Australia

Location:
33 Kimberley Street
Darra, 4076, Australia

Telephone: (61-7) 375-3277

Cairns

Cummins Diesel Sales & Service
P.O. Box 7189
Cairns Mail Centre, 4870
Queensland, Australia

Location:
Cnr. Toohey & Knight Streets
Portsmith, Cairns, 4870

Telephone: (61-70) 35-1400

Campbellfield

Cummins Diesel Sales & Service
Private Bag 9
Campbellfield, 3061
Victoria, Australia

Location:
1780-1800 Hume Highway
Campbellfield, 3061

Telephone: (613) 357-9200

Dandenong

Cummins Diesel Sales & Service
Lot 7 Greens Road
Dandenong, 3175
Victoria, Australia
Telephone: (613) 706-8088

Darwin

Cummins Diesel Sales & Service
P.O. Box 37587
Winnellie, 0821
Northern Territory, Australia

Location:
Lot 1758 Graffin Crescent
Winnellie, 0821

Telephone: (61-89) 47-0766

Devonport

Cummins Diesel Sales & Service
P.O. Box 72E
Tasmania, Australia

Location:
2 Matthews Way
Devonport, 7310

Telephone: (61-04) 24-8800

Emerald

Cummins Diesel Sales & Service
P.O. Box 668
Emerald, 4720
Queensland, Australia

Location:
Capricorn Highway
Emerald, 4720

Telephone: (61-79) 82-4022

Grafton

Cummins Diesel Sales & Service
P.O. Box 18
South Grafton, 2461
New South Wales, Australia

Location:
18-20 Induna Street
South Grafton, 2461

Telephone: (61-66) 42-3655

Hexham

Cummins Diesel Sales & Service
21 Galleghan Street
Hexham, 2322
New South Wales, Australia
Telephone: (61-49) 64-8466

Kalgoorlie

Cummins Diesel Sales & Service
P.O. Box 706
Kalgoorlie, 6430
Western Australia, Australia

Location:
16 Atbara Street
Kalgoorlie, 6430

Telephone: (61-90) 21-2588 or 21-2994

Mackay

Cummins Diesel Sales & Service
P.O. Box 842
Mackay, 4740
Queensland, Australia

Location:
4 Presto Avenue
Mackay, 4746

Telephone: (61-79) 55-1222

Mount Gambier

Cummins Diesel Sales & Service
P.O. Box 2219
Mount Gambier, 5290
South Australia, Australia

Location:
2 Avey Road
Mount Gambier, 5290

Telephone: (61-87) 25-6422

Penrith

Cummins Diesel Sales & Service
P.O. Box 132
Cambridge Park, 2747
New South Wales, Australia

Location:
7 Andrews Road
Penrith, 2750

Telephone: (61-47) 29-1313

Queanbeyan

Cummins Diesel Sales & Service
P.O. Box 527
Queanbeyan, 2620
New South Wales, Australia

Location:
15-27 Bayldon Road
Queanbeyan, 2620

Telephone: (61-62) 97-3433

Swan Hill

Cummins Diesel Sales & Service
P.O. Box 1264
Swan Hill, 3585
Victoria, Australia

Location:
5 McAllister Road
Swan Hill, 3585

Telephone: (61-50) 32-1511

Tamworth

Cummins Diesel Sales & Service
P.O. Box 677
Tamworth, 2320
New South Wales, Australia

Location:
Lot 65 Gunnedah Road
Tamworth, 2340

Telephone: (61-67) 65-5455

Welshpool

Cummins Diesel Sales & Service
P. O. Box 52
Welshpool, 6986
Western Australia, Australia

Location:
50 Kewdale Road
Welshpool, 6106

Telephone: (61-9) 458-5911

Wodonga

Cummins Diesel Sales & Service
P.O. Box 174
Wodonga, 3690
Victoria, Australia

Location:
9-11 McKoy Street
Wodonga, 3690

Telephone: (61-60) 24-3655

Distributors and Branches - New Zealand

Auckland

Cummins Diesel Sales & Service (NZ) Ltd.
Private Bag 92804
Penrose, Auckland, New Zealand

Location:
440 Church Street
Penrose

Telephone: (64-9) 579-0085

Branches:

Auckland

Cummins Diesel Engines
Private Bag 92804
Penrose, Auckland, New Zealand

Location:
440 Church Street
Penrose

Telephone: (64-9) 579-0085

Christchurch

Cummins Diesel Engines
P.O. Box 16-149
Hornby, Christchurch, New Zealand

Location:
35 Parkhouse Road
Sockburn, Christchurch

Telephone: (64-3) 348-8170

Mt. Maunganui

Cummins Diesel Engines
P.O. Box 4005
Mt. Maunganui, New Zealand

Location:
101 Totara Street
Mt. Maunganui

Telephone: (64-7) 575-0545

Palmerston North

Cummins Diesel Engines
P.O. Box 9024
Palmerston North, New Zealand

Location:
852-860 Tremaine Avenue

Telephone: (64-6) 356-2209

Regional Offices - International

North Africa Regional Office - Algiers

Cummins Corporation
Bureau de Liaison
38, Lotissement Benachour Abdelkader
Cheraga
42300 Wilaya de Tipasa
Algeria
Telephone: (213) 2374326
Country
Covered: Algeria

European Regional Office - Mechelen

Cummins Diesel N.V.
Blarenberglaan 4
Industriepark Noord 2
2800 Mecheien
Brussels
Telephone: (32-15) 20003
Countries Covered:
Austria
Belgium
Czech Republic
Denmark
Finland
Greece
Hungary
Iceland
Israel
Luxembourg
Netherlands
Norway
Portugal
Slovakia
Spain
Sweden
Switzerland

Cumbrasa Regional Office - Brazil

Cummins Brasil S.A.
Rua Jati, 266
07180-900 Guarulhos
Sao Paulo, Brazil

Mailing Address:
P.O. Box 13
07180-900 Guarulhos
Sao Paulo, Brazil
Telephone: (55-11) 945-9811
Country
Covered: Brazil

Beijing Regional Office - China

Cummins Corporation
China World Tower, Suite 917
China World Trade Center
No. 1 Jian Guo Men Wai
Beijing 100004
People's Republic of China
Telephone: (86-1) 505-4209/10
Countries
Covered:
China
Mongolia

Bogota Regional Office - Columbia

Cummins Engine Co. de Colombia S.A.
Carrera 11A No. 90-15 Of. 601/602
Bogota, D.E., Colombia
Telephone: (57-1) 610-4849

Mailing Address:
Apartado Aereo 90988
Bogota D.E., Colombia
Countries
Covered:
Argentina
Bolivia
Chile
Colombia
Ecuador
Paraguay
Peru
Uruguay

Lyon Regional Office - France

Cummins Diesel Sales Corporation
39, rue Ampere - Zone Industrielle
69680 Chassieu
France
Telephone: (33) 72-22-92-72
Countries
Covered:
Algeria
France
Guadeloupe
Guyana
Martinique
New Caledonia
Reunion

Gross-Gerau Regional Office - Germany

Cummins Diesel Deutschland GmbH
Odenwaldstr. 23
D-6080 Gross-Gerau
Germany
Telephone: (49-6152) 174-0
Countries Covered:
Albania
Bulgaria
*Czech Republic
Germany
Luxembourg
Poland
Romania
Southeastern Europe
Slovika
*Marine Only

Hong Kong Regional Office - Hong Kong

Cummins Engine H.K. Ltd.
Unison Industrial Centre
15th Floor, Units C & D
27-31 Au Pui Wan Street
P. O. Box 840 Shatin
Fo Tan, Shatin, N.T.
Hong Kong
Telephone: (852) 606-5678
Country
Covered: Hong Kong

Pune Kirloskar Regional Office - India

Kirloskar Cummins Limited
Kothrud
Pune - 411 029, India
Telephone: (91-212) 33-0240, 33-5435, 33-1105
Countries Covered: Bhutan, India, Nepal

Milan Regional Office - Italy

Cummins Diesel Italia S.P.A.
Piazza Locatelli 8
Zona Industriale
20098 San Giuliano Milanese
Milan, Italy
Telephone: (39-2) 982-81235/6/7
Country Covered: Italy

North Asia Regional Office - Japan

Cummins Diesel Sales Corporation
1-12-10 Shintomi
Chuo-ku, Tokyo 104
Japan
Telephone: (81-3) 3555-3131/2/3/4/5
Country Covered: Japan

Seoul Regional Office - Korea

Cummins Korea Ltd.
5th Floor, Hye Sung Building
35-26 Sam Sung Dong, Kang Nam Ku
Seoul, South Korea
Telephone: (82-2) 516-0431/2/3, 517-3370/1
Country Covered: South Korea

Cummsa Regional Office - Mexico

Cummins, S.A. de C.V.
Arquimedes No. 209
Col. Polanco
11560 Mexico, D.F.
Mexico
Telephone: (52-5) 254-3822/3783/3622

Mailing/Shipping Address:
Gonzalez de Castilla Inc.
P.O. Box 1391
4605 Modern Lane
Modern Industrial Park
Laredo, TX 78040
Telephone: (512) 722-5207
Country Covered: Mexico

Moscow Regional Office - Russia

Cummins Engine Co., Inc.
Park Place
Office E708
Leninsky Prospect 113
Russia 11798
Telephone: (7-502) 256-5122 or 256-5123

Countries Covered: Armenia, Azerbaijan, Bolarus, Estonia, Georgia, Kirghizia, Latvia, Lithuania, Moldova, Russia, Tadzhikstan, Turkmenistan, Ukraina, Uzbekistan

South And East Asia Area Office - Singapore

Cummins Diesel Sales Corporation
8 Tanjong Penjuru
Jurong Industrial Estate
Singapore 2260
Telephone: (65) 265-0155

Countries Covered: Bangladesh, Brunei, Burma/Mynamar, Cambodia, China, Hong Kong, Indonesia, Laos, Macau, Malaysia, Mongolia, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam

Taipei Regional Office - Taiwan

Cummins Corporation - Taiwan
12th Floor, No. 149
Min-Sheng E. Road
Section 2
Taipei, Taiwan
R.O.C. 104
Telephone: (886-2) 515-0891
Country Covered: Taiwan

Turkey and Iran Regional Office - Turkey

Cummins Corporation
Istanbul Office
Buyukdere Cad.
Beytem Han, Kat 11
Sisli 80220
Istanbul
Telephone: (90-1) 246-2575/2775/2545
Countries Covered: Iran, Turkey

Middle East/Africa Regional Office - Daventry (U.K.)

Cummins Engine Company Ltd.
Royal Oak Way South
Daventry, Northants NN11 5NU
England
Telephone: (44-327) 76000
Countries Covered:

MIDEAST

Afghanistan	Jordan	Saudi Arabia
Bahrain	Kuwait	Sudan
Cyprus	Lebanon	Syria
Djibouti	Oman	U.A.E.
Egypt	Pakistan	Yemen
Iraq	Qatar	

NORTH/WEST AFRICA

Benin	Gabon	Mauritania
Burkina-Paso	Gambia	Morocco
Cameroon	Ghana	Niger
Cape Verde	Guinea	Nigeria
Central African Republic	Guinea-Bissau	Sao Tome & Principe
Chad	Liberia	Senegal
Cote d'Ivoire	Libya	Siera Leone
Equatorial Guinea	Mali	Togo
	Malta	Tunisia

SOUTH AFRICA

Botswana	Namibia	Swaziland
Lesotho	South Africa	

New Malden Regional Office - U.K.

Cummins Engine Company Limited
46-50 Coombe Road
New Malden
Surrey KT3 4QL
England
Telephone: (44-81) 949-6171
Countries Covered: Ireland, United Kingdom

Latin America Regional Office - Miramar (U.S.A.)

Cummins Americas, Inc.
Miramar Park of Commerce
3450 Executive Way
Miramar, FL 33025
Telephone: (305) 431-5511
Countries Covered:

Argentina	Guatemala
Bolivia	Honduras
Chile	Nicaragua
Colombia	Panama
Costa Rica	Paraguay
Dominican Republic	Peru
El Salvador	Uruguay
Eucador	Venezuela

Caracas Regional Office - Venezuela

Cummins Engine Company
Oficina de Delegado
Torre La Primera, Oficina 5-D
Av. Francisco de Miranda
Chacao, Caracas 1060

Mailing Address:
Cummins Engine Company M-227
c/o Jet Cargo International
P.O. Box 020010
Miami, FL 33102-0010 U.S.A.
Telephone: (58-2) 32-0563, 32-718
Countries Covered: Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Venezuela

East/Southern Africa Regional Office - Harare, Zimbabwe

Cummins Zimbabwe (Private) Limited
72 Birmingham Road
Southerton
Harare, Zimbabwe

Mailing Address:
P.O. Box ST363
Southerton
Harare, Zimbabwe
Telephone: (263-4) 67645, 60553, 69220
Countries Covered:

Angola	Reunion
Burundi	Rwanda
Comoros Island	Seychelles
Congo	Somalia
Ethiopia	Tanzania
Kenya	Uganda
Madagascar	Zaire
Malawi	Zambia
Mauritius	Zimbabwe
Mozambique	

Distributors - International

ABU DHABI
-See United Arab Emirates

AFGHANISTAN
-See Middle East Regional Office

ALBANIA
-See Germany Regional Office - Gross Gerau

ALGERIA

Algiers
Cummins Corporation
Bureau de Liaison
38, Lotissement Benachour Abdelkader
Cheraga
43200 Wilaya de Tipasa
Algeria
Telephone: (213) 237-43-26

AMERICAN SAMOA
- See South Pacific Regional Office

ANDORRA
-See European Regional Office - Mechelen

ANTIGUA

Miami (Office in U.S.A.)
Cummins Southeastern Power, Inc.
9900 N.W. 77 Court
Hialeah Gardens, FL 33016
Telephone: (305) 821-4200

ARGENTINA

Buenos Aires
Distribuidora Cummins, S.A. (DICUMAR)
Av. Del Libertador 602 Piso 5
Buenos Aires, Argentina
Telephone: (54-1)814-1895/1395/1393

ARUBA, ISLAND OF
-See Netherlands Antilles

AUSTRIA

Neudoerfl
Cummins Diesel Motorenvertriebsges m.b.H. Trenner & Co.
Bickfordstr. 25
A-7201 Neudoerfl
Austria
Telephone: (43-2622) 77418/77625

BAHAMAS

Miami (Office in U.S.A.)
Cummins Southeastern Power, Inc.
9900 N.W. 77 Court
Hialeah Gardens, FL 33016
Telephone: (305) 821-4200

BAHRAIN

Bahrain
Yusuf Bin Ahmed Kanoo W.L.L.
P.O. Box 45, Manama
Bahrain
Telephone: (973) 400414/400506

BALEARIC ISLANDS

Madrid (Office in Spain)
Cummins Ventas y Servicio, S.A.
Torrelaguna, 56
28027 Madrid, Spain
Telephone: (34-91) 367-2000
376-2404

BANGLADESH

Dhaka
Equipment & Engineering Co., Ltd.
G.P.O. Box 2339
Dhaka 1000, Bangladesh

Location:
56, Dilkusha Commercial Area
2nd Floor/Eastern Block
Telephone: (880-2) 234357, 234060

BARBADOS

Miami (Office in U.S.A.)
Cummins Southeastern Power, Inc.
9900 N.W. 77 Court
Hialeah Gardens, FL 33016
Telephone: (305) 821-4200

BELGIUM

Brussels
Cummins Distributor
Belgium S.A.
623/629 Chaussee de Haecht
B-1030 Brussels, Belgium
Telephone: (24 hr.)
(32-2) 216-81-10

BELIZE

Tampa (Office in U.S.A.)
Cummins Southeastern Power, Inc.
5421 N. 59th Street
Tampa, FL 33610
Telephone: (813) 621-7202

BENIN
-See Togo

BERMUDA

Bronx (Office in U.S.A.)
Cummins Metropower, Inc.
890 Zerega Avenue
Bronx, NY 10473
Telephone: (718) 892-2400

BHUTAN

Pune (Office in India)
Cummins Diesel Sales & Service (India) Ltd.
35A/1/2, Erandawana
Pune - 411 038, India
(State of Maharashtra) India
Telephone: (91-212) 331234/331554/
331635/
330066/330166/
330356/331703

BOLIVIA

La Paz
Machinery & Auto Service
Casilla 4042
La Paz, Bolivia

Location:
Av. 20 de Octubre Esq.
Rosendo Gutierrez
Telephone: (591-2) 379650, 366394

BONAIRE, ISLAND OF
-See Netherlands Antilles

BOTSWANA
-See East and Southern Africa Regional Office
Harare

BRAZIL

Ananindeua
Marcos Marcelino & Companhia Ltda.
Rodovia BR-316, Km 9
67020-010 Ananindeua, Para,
Brazil
Telephone: (55-91) 235-4100/4132/
4143/4012

Belo Horizonte
Distribuidora Cummins Minas S.A.
31950-640 Olhos D'Água Norte
Belo Horizonte, MG
Brazil
Telephone: (55-31) 288-1344

Campo Grande
Distribuidora Cummins Mato Grosso Ltda.
Rodovia BR 163 Km 01
79060-000 Campo Grande
Mato Grosso do Sul, Brazil
Telephone: (55-67).787-1166

Curitiba
Distribuidora Cummins Parana S.A.
Rua Brasilio Itibere, 2195
80230 Curitiba, Parana
Brazil
Telephone: (55-41) 222-4036

Fortaleza
Distribuidora Cummins Diesel Do Nordeste Ltda.
Av. da Abolicao, 3882,
Mucuripe
60165-081 Fortaleza, Ceara
Brazil
Telephone: (55-85) 263-1212

Goianian
Distribuidora de Motores Cummins Centro Oeste Ltda.
Av. Caiapo 777 - Setor Sta. Genoveva
74672-400 Goiania, Goias
Brazil
Telephone: (55-62) 207-1010

Section C - Component Manufacturers

Section Contents

Component Manufacturers' Addresses

NOTE: The following list contains addresses and telephone numbers of suppliers of accessories used on Cummins engines. Suppliers may be contacted directly for any specifications **not** covered in this manual.

Air Compressors

Bendix Heavy Vehicles Systems
Div. of Allied Automotive
901 Cleveland Street
Elyria, OH 44036
Telephone: (216) 329-9000

Holset Engineering Co., Inc.
1320 Kemper Meadow Drive
Suite 500
Cincinnati, OH 45240
Telephone: (513) 825-9600

Midland-Grau
Heavy Duty Systems
Heavy Duty Group Headquarters
10930 N. Pomona Avenue
Kansas City, MO 64153
Telephone: (816) 891-2470

Air Cylinders

Bendix Ltd.
Douglas Road
Kingswood
Bristol
England
Telephone: 0272-671881

Catching Engineering
2101 Roberts Drive
Broadview, IL 60153
Telephone: (312) 344-2334

Air Heaters

Fleetguard, Inc.
P.O. Box 6001
Cookeville, TN 38502
Telephone: (615) 526-9551

Kim Hotstart Co.
West 917 Broadway
Spokane, WA 99210
Telephone: (509) 534-6171

Air Starting Motors

Ingersoll Rand
Chorley New Road
Horwich
Bolton
Lancashire
England
BL6 6JN
Telephone: 0204-65544

Ingersoll-Rand Engine
Starting Systems
888 Industrial Drive
Elmhurst, IL 60126
Telephone: (312) 530-3800

StartMaster
Air Starting Systems
A Division of Sycon Corporation
P. O. Box 491
Marion, OH 43302
Telephone: (614) 382-5771

Alternators

Robert Bosch Ltd.
P.O. Box 98
Broadwater Park
North Orbital Road
Denham
Uxbridge
Middlesex UD9 5HG
England
Telephone: 0895-833633

Butec Electrics
Cleveland Road
Leyland
PR5 1XB
England
Telephone: 0744-21663

C.A.V. Electrical Equipment
P.O. Box 36
Warple Way
London
W3 7SS
England
Telephone: 01-743-3111

A.C. Delco Components Group
Civic Offices
Central Milton Keynes
MK9 3EL
England
Telephone: 0908-66001

C. E. Niehoff
2021 Lee Street
Evanston, IL 60202
Telephone: (708) 866-6030

Delco-Remy
P.O. Box 2439
Anderson, IN 46018
Telephone: (317) 646-7838

Leece-Neville Corp.
1374 E. 51st St.
Cleveland, OH 44013
Telephone: (216) 431-0740

Auxiliary Brakes

The Jacobs Manufacturing Company
Vehicle Equipment Division
22 East Dudley Town Road
Bloomfield, CT 06002
Telephone: (203) 243-1441

Belts

Dayco Rubber U.K.
Sheffield Street
Stockport
Cheshire
SK4 1RV
England
Telephone: 061-432-5163

T.B.A. Ind. Products
P.O. Box 77
Wigan
Lancashire
WN2 4XQ
England
Telephone: 0942-59221

Dayco Corp.
Belt Technical Center
P.O. Box 3258
Springfield, MO 65804
Telephone: (417) 881-7440

Gates Rubber Company
5610 Crawfordsville Road
Suite 2002
Speedway, IN 46224
Telephone: (317) 248-0386

Goodyear Tire and
Rubber Company
49 South Franklin Road
Indianapolis, IN 46219
Telephone: (317) 898-4170

Catalytic Convertors

Donaldson Company, Inc.
1400 West 94th Street
P.O. Box 1299
Minneapolis, MN 55440
Telephone: (612) 887-3131

Nelson Industries, Inc.
Exhaust and Filtration Systems
Highway 51 West, P.O. Box 428
Stoughton, WI 53589
Telephone: (608) 873-4373

Walker Manufacturing
3901 Willis Road
P.O. Box 157
Grass Lake, MI 49240
Telephone: (517) 522-5500

Clutches

Twin Disc International S.A.
Chaussee de Namur
Nivelles
Belguim
Telephone: 067-224941

Twin Disc Clutch Co.
Racine, WI 53403
Telephone: (414) 634-1981

Coolant Heaters

Fleetguard, Inc.
P.O. Box 6001
Cookeville, TN 38502
Telephone: (615) 526-9551

Drive Plates

Detroit Diesel Allison
Division of General Motors
Corporation
P.O. Box 894
Indianapolis, IN 46206
Telephone: (317) 244-1511

Electric Starting Motors

Butec Electrics
Cleveland Road
Leyland
PR5 1XB
England
Telephone: 0744-21663

C.A.V. Electrical Equipment
P.O. Box 36
Warple Way
London
W3 7SS
England
Telephone: 01-743-3111

A.C. Delco Components Group
Civic Offices
Central Milton Keynes
MK9 3EL
England
Telephone: 0908-66001

D[illegible]-Remy
P.O. Box 2439
Anderson, IN 46018
Telephone: (317) 646-7838

Leece-Neville Corp.
1374 E. 51st Street
Cleveland, OH 44013
Telephone: (216) 431-0740

Nippondenso Sales, Inc.
24777 Denso Drive
P.O. Box 5133
Southfield, MI 48086-5133
Telephone: (313) 350-7500

Nippondenso of Los Angeles, Inc.
3900 Via Oro Avenue
Long Beach, CA 90810
Telephone: (310) 834-6352

Engine Protection Controls

Teddington Industrial
Equipment
Windmill Road
Sunbury on Thames
M[illegible]esex
TW16 7HF
England
Telephone: 09327-85500

The Nason Company
10388 Enterprise Drive
Davisburg, MI 48019
Telephone: (313) 625-5381

Fan Clutches

Holset Engineering Co. Ltd.
P.O. Box 9
Turnbridge
Huddersfield
England
Telephone: 0484-22244

Horton Industries, Inc.
P.O. Box 9455
Minneapolis, MN 55440
Telephone: (612) 378-6410

Rockford Division
Borg-Warner Corporation
1200 Windsor Road
P.O. Box 7007
Rockford, IL 61125-7007
Telephone: (815) 633-7460

Transportation Components Group
Facet Enterprises, Inc.
Elmira, NY 14903
Telephone: (607) 737-8212

Fans

Truflo Ltd.
Westwood Road
Birmingham
B6 7JF
England
Telephone: 021-557-4101

Hayes-Albion
1999 Wildwood Avenue
Jackson, MI 49202
Telephone: (517) 782-9421

Engineering Cooling Systems
201 W. Carmel Drive
Carmel, IN 46032
Telephone: (317) 846-3438

Brookside
McCordsville, IN 46055
Telephone: (317) 335-2014

Aerovent
8777 Purdue Rd.
Indianapolis, IN 46268
Telephone: (317) 872-0030

Kysor
1100 Wright Street
Cadillac, MI 49601
Telephone: (616) 775-4681

Schwitzer
1125 Brookside Avenue
P.O. Box 80-B
Indianapolis, IN 46206
Telephone: (317) 269-3100

Filters

Fleetguard International Corp.
Cavalry Hill Industrial Park
Weedon
Northampton NN7 4TD
England
Telephone: 0327-41313

Fleetguard, Inc.
P.O. Box 6001
Cookeville, TN 38502
Telephone: (615) 526-9551

Flexplates

Corrugated Packing and
Sheet Metal
Hamsterley
Newcastle Upon Tyne
Telephone: 0207-560-505

Allison Transmission
Division of General Motors
Corporation
P.O. Box 894
Indianapolis, IN 46206
Telephone: (317) 244-1511

Allison Transmission
Division of General Motors
36501 Van Born Road
Romulus, MI 48174
Telephone: (313) 595-5711

Midwest Mfg. Co.
30161 Southfield Road
Southfield, MI 48076
Telephone: (313) 642-5355

Wohlert Corporation
708 East Grand River Avenue
Lansing, MI 48906
Telephone: (517) 485-3750

Fuel Warmers

Fleetguard, Inc.
P.O. Box 6001
Cookeville, TN 38502
Telephone: (615) 526-9551

Gauges

A.I.S.
Dyffon Industrial Estate
Ystrad Mynach
Hengoed
Mid Glamorgan
CF8 7XD
England
Telephone: 0443-812791

Grasslin U.K. Ltd.,
Vale Rise
Tonbridge
Kent
TN9 1TB
England
Telephone: 0732-359888

Icknield Instruments Ltd.
Jubilee Road
Letchworth
Herts
England
Telephone: 04626-5551

Superb Tool and Gauge Co.
21 Princip Street
Birmingham
B4 61E
England
Telephone: 021-359-4876

Kabi Electrical and Plastics
Cranborne Road
Potters Bar
Herts
EN6 3JP
England
Telephone: 0707-53444

Datcon Instrument Co.
P.O. Box 128
East Petersburg, PA 17520
Telephone: (717) 569-5713

Rochester Gauge of Texas
11637 Denton Drive
Dallas, TX 75229
Telephone: (214) 241-2161

Governors

Woodward Governors Ltd.
P.O. Box 15
663/664 Ajax Avenue
Slough
Bucks
SL1 4DD
England
Telephone: 0753-26835

Woodward Governor Co.
1000 E. Drake Road
Fort Collins, CO 80522
Telephone: (303) 482-5811

Barber Colman Co.
1300 Rock Street
Rockford, IL 61101
Telephone: (815) 877-0241

Extended Major Components Warranty

The Extended Major Components Warranty applies to Engines other than B and C series and covers Warrantable Failures of the Engine cylinder block, camshaft, crankshaft and connecting rods (Covered Parts). Bushing and bearing failures are not covered. This coverage begins with the expiration of the Base Engine Warranty and continues for the Duration stated below. The Duration commences either on the date of delivery of the Engine to the first user, or on the date the Engine is first leased, rented or loaned, or when the Engine has been operated for 50 hours, whichever occurs first.

Extended Major Components Warranty

	Duration Whichever Occurs First	
Rating	Months	Hours
Standby Power	36	600
Unlimited Prime Power	36	10,000
Limited Prime Power	36	2,250
Continuous/Base Power	36	10,000

Consumer Products

This warranty on Consumer Products in the United States is a LIMITED warranty. **CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.** Any implied warranties applicable to Consumer Products terminate concurrently with the expiration of the express warranties applicable to the product. In the United States, some states do not allow the exclusion of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

These warranties are made to all Owners in the chain of distribution, and Coverage continues to all subsequent Owners until the end of the periods of Coverage.

Cummins Responsibilities

During Base Engine Warranty

Cummins will pay for all parts and labor needed to repair the damage to the Engine resulting from a Warrantable Failure. when performed during normal business hours. All labor costs will be paid in accordance with Cummins published Standard Repair Time guidelines.

Cummins will pay for the lubricating oil, antifreeze, filter elements, and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay reasonable travel expenses for mechanics to travel to and from the Engine site, including meals, mileage, and lodging when the repair is performed at the site of the failure.

Cummins will pay reasonable labor costs for Engine removal and reinstallation when necessary to repair a Warrantable Failure.

During the Extended Major Components Warranty

Cummins will pay for the repair or, at its option, replacement of the defective Covered Part and any Covered Part damaged by a Warrantable Failure of the defective Covered Part.

Owner's Responsibilities

During the Base Engine Warranty

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items replaced during warranty repairs unless such items are not reusable due to the Warrantable Failure.

During the Extended Major Components Warranty

Owner is responsible for the cost of all labor needed to repair the Engine, including the labor cost for Engine removal and reinstallation. When Cummins elects to repair a part instead of replacing it, the Owner is not responsible for the labor needed to repair the part.

Owner is responsible for the cost of all parts required for the repair except for the defective Covered Part and any Covered Part damaged by a Warrantable Failure of the defective Covered Part.

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items replaced during repair of a Warrantable Failure.

During the Base Engine and Extended Major Components Warranties

Owner is responsible for the operation and maintenance of the Engine as specified in the applicable Cummins Operation and Maintenance Manual. Owner is also responsible for providing proof that all recommended maintenance has been performed.

Before the expiration of the applicable warranty, Owner must notify a Cummins distributor, authorized dealer or other repair location approved by Cummins of any Warrantable Failure and make the Engine available for repair by such facility. Locations in the United States and Canada are listed in the Cummins United States and Canada Sales and Service Directory; other locations are listed in the Cummins International Sales and Service Directory.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred as a result of a Warrantable Failure.

Owner is responsible for non-Engine repairs, "downtime" expenses, fines, all applicable taxes, all business costs and other losses resulting from a Warrantable Failure.

Owner is responsible for providing sufficient access to and reasonable ability to remove the Engine from the installation in the event of a Warrantable Failure.

Owner is responsible for maintaining an operating Engine hourmeter. If the hourmeter is not operational, engine usage will be estimated at 400 hours per month.

Limitations

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications to the Engine. Cummins is also not responsible for Engine performance problems or failures caused by incorrect oil or fuel, or by water, dirt or other contaminants in the fuel or oil.

This warranty does not apply to accessories supplied by Cummins which bear the name of another company. This category includes, but is not limited to: alternators, starters, fans, air conditioning compressors, clutches, filters, transmissions, air cleaners and safety shutdown switches.

Before a claim for excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

Failure of belts and hoses supplied by Cummins are not covered beyond the first 500 hours or one year of operation, whichever occurs first after the warranty start date.

Parts used to repair a Warrantable Failure may be new Cummins parts, Cummins approved rebuilt parts, or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

A new Cummins or Cummins-approved rebuilt part used to repair a Warrantable Failure assumes the identity of the part it replaced and is entitled to the remaining coverage hereunder.

Cummins is not responsible for Engine performance problems or failures resulting from:

1. Use or application of the Engine inconsistent with its rating designation as set forth above.
2. Inadequate or incorrect installations deviating from Cummins Generator Drive Installation Guidelines.

CUMMINS IS NOT RESPONSIBLE FOR WEAR OR WEAROUT OF COVERED PARTS.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THE WARRANTIES SET FORTH HEREIN ARE THE SOLE WARRANTIES MADE BY CUMMINS IN REGARD TO THESE ENGINES. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

In the United States* and Canada, this warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Outside the United States* and Canada, in case of consumer sales, in some countries, the Owner has statutory rights which cannot be affected or limited by the terms of this warranty.

Nothing in this warranty excludes or restricts any contractual rights the owner may have against third parties.

*United States includes American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico, and the U.S. Virgin Islands.

Worldwide Mobile Farming Equipment

Coverage

PRODUCTS WARRANTED

This warranty applies to new Engines sold by Cummins Engine Company, Inc., hereinafter 'Cummins', and delivered to the first user on or after February 1, 1993, that are used in industrial (off-highway) applications in the United States* and Canada, except for Engines used in marine, generator drive and certain defense applications, for which different warranty coverage is provided.

BASE ENGINE WARRANTY

This warranty covers any failures of the Engine, under normal use and service, which result from a defect in material or workmanship (Warrantable Failure).

Coverage begins with the sale of the Engine by Cummins. Coverage continues for two years or 2,000 hours of operation, whichever occurs first, from the date of delivery of the Engine to the first user, or from the date the unit is first leased, rented or loaned, or when the Engine has been operated for 50 hours, whichever occurs first. If the 2,000 hour limit is exceeded during the first year, coverage continues until the end of the first year.

EXTENDED MAJOR COMPONENTS WARRANTY

The Extended Major Components Warranty covers Warrantable Failures of the Engine cylinder block, camshaft, crankshaft and connecting rods (Covered Parts).

Bushing and bearing failures are not covered.

This coverage begins with the expiration of the Base Engine Warranty and ends after three years or 10,000 hours of operation, from the date of delivery of the Engine to the first user, or from the date the unit is first leased, rented or loaned, or from when the Engine has been operated for 50 hours, whichever occurs first.

CONSUMER PRODUCTS

The warranty on Consumer Products in the United States is a LIMITED warranty. **CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.** Any implied warranties applicable to Consumer Products in the United States terminate concurrently with the expiration of the express warranties applicable to the product. In the United States, some states do not allow the exclusion of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

These warranties are made to all Owners in the chain of distribution, and Coverage continues to all subsequent Owners until the end of the periods of Coverage.

Cummins Responsibilities

DURING THE BASE ENGINE WARRANTY

Cummins will pay for all parts and labor needed to repair the damage to the Engine resulting from a Warrantable Failure.

Cummins will pay for the lubricating oil, antifreeze, filter elements, and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay reasonable costs for mechanics to travel to and from the equipment site, including meals, mileage and lodging, when the repair is performed at the site of the failure.

Cummins will pay reasonable labor costs for Engine removal and reinstallation when necessary to repair a Warrantable Failure.

DURING THE EXTENDED MAJOR COMPONENTS WARRANTY

Cummins will pay for the repair or, at its option, replacement of the defective Covered Part and any Covered Part damaged by a Warrantable Failure of the defective Covered part.

Owners Responsibilities

DURING THE BASE ENGINE WARRANTY

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items provided during warranty repairs unless such items are not reusable due to the Warrantable Failure.

NOTES

NOTES

Cummins Engine Company, Inc.
Box 3005
Columbus, Indiana, U.S.A., 47202-3005
Cable: CUMDIEX COLUMBUS

Cummins Engine Company, Ltd.
46-50 Coombe Road
New Malden
Surrey KT3 4QL,
England
Cable: CUMEUR G
Registration No. 573951 England

Bulletin No. 3666002-02

CUMMINS NT/NTA855 BIG CAM III
OPR & MAINT MANUAL