

BASIC TOOL GROUPS

4C-3502 Engine Repair Indicator Kit

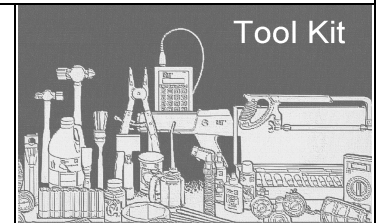
Used to check general engine condition

Engines: All engines

- See T&SPG (NENG2500) for content of tool group

CAT Dealer

Recommended



Tool Kit

CYLINDER BLOCK & LINER

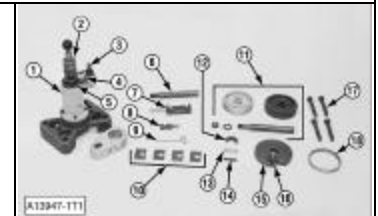
5P-4175 Counterboring Tool

Reconditions cylinder block liner counterbores

Engines: All 3300, 3400 Diesel & 3500 Diesel

CAT Dealer

Recommended



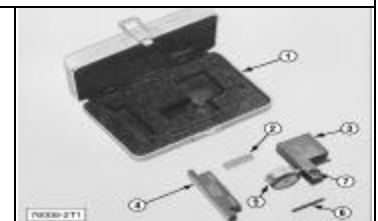
8T-0455 Tool Gp. - Liner Projection

Measures cylinder liner projection and counterbore depth

Engines: C-9, All 3300, 3176/96, C-10/12, C11/C13 All 3400, C-15/16, C15, All 3500

CAT Dealer

Required



2P-8260 Installer Gp. - Cylinder Liner

Pushes cylinder liner into cylinder block

Engines: C-9, All 3300, 3176/96, C-10/12, C11/C13, All 3400, C-15/16, C15, All 3500

CAT Dealer

Required



FT1543 Plate

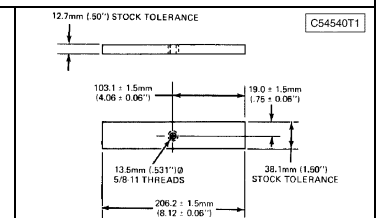
Used to install cylinder liners into cylinder block

Engines: All 3500

- Used with 2P-8260 Cylinder Liner Installer Gp. (replaces 2P-8257 Plate)

CAT Dealer

Required



1U-6319 Socket

Used with cylinder pack puller to allow use of impact gun

Engines: All 3300, 3176/96, C-10/12, C11/ C13, All 3400, C15, C-15/16, All 3500

CAT Dealer

Required



5P-8665 Puller - Cylinder Liner

Removes cylinder liner from cylinder block

Engines: All 3300, 3176/96, C-10/12, C11, C13, All 3400, C-15/16, C15, All 3500

CAT Dealer

Required



3500 Family - Tool List

CYLINDER BLOCK & LINER

8T-2686 Puller - Cylinder Liner

Used to remove & install cylinder pack (rubber plug type, 170 mm bore)

Engines: All 3500

- Requires FT1970 Bridge

CAT Dealer

Required



C27150T1

FT1970 Bridge

Used to remove cylinder liner

Engines: All 3500

- Used with 8T-2686 Cylinder Liner Puller

CAT Dealer

Required

No Picture Available

PISTON, RINGS & CONNECTING ROD

1U-7616 Compressor Gp. - Ring

Compresses piston rings for installation into cylinder bore

Engines: All 3500

CAT Dealer

Required



B03620T1

6V-4020 Expander Gp. - Ring

Removes and installs piston rings

Engines: All 3500

CAT Dealer

Required



B14940T1

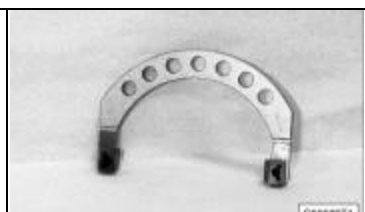
9U-7360 Gauge Gp - Ring Groove

Checks piston compression ring groove for piston reusability

Engines: 3500 (except 3524B)

CAT Dealer

Recommended



C66630T1

4C-8725 Adapter

Used to remove and install connecting rod pin bearing

Engines: 3500 (with 10 degree connecting rod)

- Used with 5P-8639 Press Gp.

CAT Dealer

Required



C70271-1

4C-8726 Spacer

Used to remove and install connecting rod pin bearing

Engines: 3500 (with 10 degree connecting rod)

- Used with 5P-8639 Press Gp.

CAT Dealer

Required



C70271-2

4C-8727 Adapter

Used to remove and install connecting rod pin bearing

Engines: 3500 (with 10 degree connecting rod)

- Used with 5P-8639 Press Gp.

CAT Dealer

Required



C70271-3

3500 Family - Tool List

PISTON, RINGS & CONNECTING ROD

5P-8639 Press Gp.

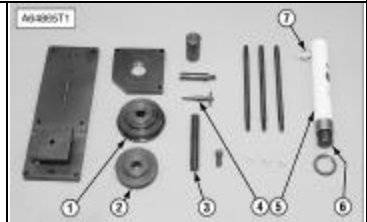
Used to remove and install connecting rod pin bearings

Engines: All engines (except 3000 & 3600)

- Requires hydraulic tools and engine specific tooling - see T&SPG for details
- Reference: SMHS7295 Special Instruction

CAT Dealer

Required



5P-8649 Adapter - Pin Bushing

Used to remove and install connecting rod pin bearings

Engines: 3176/96, C-10/12, 3400, 3500 (with 6 degree connecting rod)

- Used with 5P-8639 Press Gp.

CAT Dealer

Required



6V-3042 Adapter - Push

Used to remove and install connecting rod pin bearing

Engines: 3500 (with 6 degree connecting rod)

- Used with 5P-8639 Press Gp.

CAT Dealer

Required



6V-3043 Spacer

Used to remove and install connecting rod pin bearings

Engines: 3500 (with 6 degree connecting rod)

- Used with 5P-8639 Press Gp.

CAT Dealer

Required



136-1452 Pliers As. - Internal

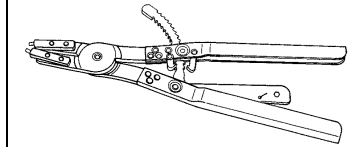
Removes and installs piston retaining ring

Engines: All 3500, All 3600

- Part of 9U-5105 Basic Tool Gp.

CAT Dealer

Required



C55162T1

204-8041 Ring Groove Gauge (3500 HD)

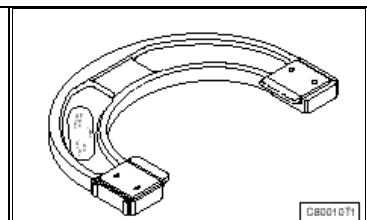
Used to check 3500 HD pistons for wear

Engines: 3500 HD (high displacement engines)

- Reference: NEHS0834 Tool Operating Manual

CAT Dealer

Required



C80010T1

4C-4519 Gauge As.

Checks top and intermediate ring grooves to determine piston reusability

Engines: All 3500 (except 3524B)

CAT Dealer

Required



C66556T1-1

CRANKSHAFT, MAIN BEARINGS & FLYWHEEL

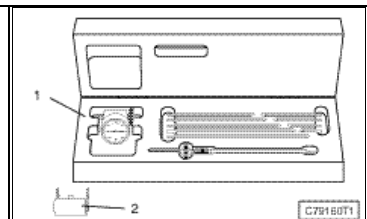
155-8795 Gauge - Crankshaft Distortion

Checks crankshaft bearing alignment or shaft deflection

Engines: All 3500, All 3600

CAT Dealer

Required



C78160T1

3500 Family - Tool List

CRANKSHAFT, MAIN BEARINGS & FLYWHEEL

230-5843 Main Bearing Cap R & I

Used to remove and install 3/4" thd main bearing cap on early 3500 Engines.

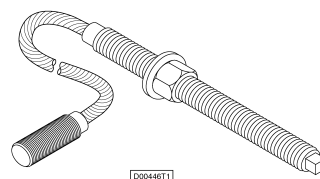
Engines: All 3500 with 3/4" thd main bearing cap

- Two required

Use 236-6688 Main Bearing Cap R & I tooling for later 3500 Engines with 7/8" thd main brg cap

CAT Dealer

Recommended



D00446T1

236-6688 Main Bearing Cap R & I

used to remove and install 7/8" thd main bearing cap on later 3500 engines

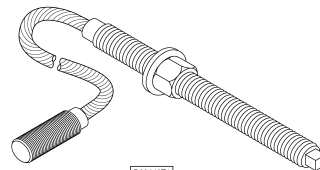
Engines: All 3500 (with 7/8" main bearing cap)

- Two required

• Use 230-5843 Main Bearing Cap R & I tool on earlier 3500 engines with 3/4" thd main brg cap

CAT Dealer

Recommended



D00446T1

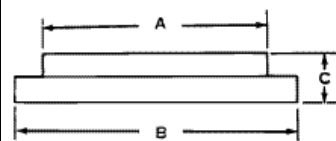
8B-7561 Step Plate

Used to remove front crankshaft pulley, gear & camshaft drive gear

Engines: 3208, 3400, 3500, G3600

CAT Dealer

Required



C09408T1

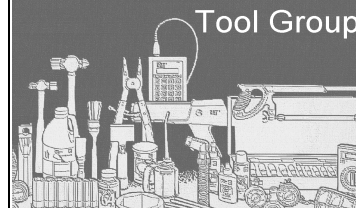
187-1841 Installer - Seal & Wear Sleeve

Installs rear crankshaft seal and wear sleeve on 3524B rear engine

Engines: 3524B

CAT Dealer

Required



192-6339 Locator As. - Crankshaft Seal

Installs rear crankshaft seal and wear sleeve on 3524B rear engine

Engines: 3524B

CAT Dealer

Required

No Picture Available

1U-7325 Distorter Adapter

Used to remove front & rear crankshaft seal and wear sleeve

Engines: All 3500

CAT Dealer

Recommended

No Picture Available

5P-7409 Distorter

Used to remove crankshaft seal and wear sleeves

Engines: 3406, All 3500, All 3600

- Part of 9U-5105 Basic Tool Gp.

CAT Dealer

Required



A85330T1

6V-3143 Distorter Adapter

Used to remove crankshaft seal and wear sleeve

Engines: All 3500 (with seal adapter group)

CAT Dealer

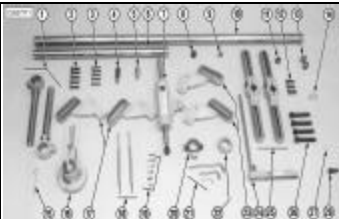
Required



S14944T1

3500 Family - Tool List

CRANKSHAFT, MAIN BEARINGS & FLYWHEEL

6V-4001 Forcing Ring <i>Used to install crankshaft seal and wear sleeve</i> Engines: All 3500 CAT Dealer Required	No Picture Available
6V-4002 Forcing Bracket <i>Used to install crankshaft seal and wear sleeve</i> Engines: All 3500 Two required CAT Dealer Required	No Picture Available
6V-4003 Locator <i>Used to install crankshaft seal and wear sleeve</i> Engines: All 3500 Requires (2) 2N-5006 Bolts CAT Dealer Required	
6V-4977 Installer <i>Installs crankshaft seal and wear sleeve</i> Engines: 3500 (with 1W6975 & 1W6978 Adapter Gp.) CAT Dealer Required	
8T-3099 Installer <i>Installs crankshaft seals and wear sleeves</i> Engines: 3500 (without 1W6975 & 1W6978 Adapter Gp.) CAT Dealer Required	
9S-8858 Nut As. <i>Used to install crankshaft seal and wear sleeve</i> Engines: All engines (except 3000 & 3600) Part of 1U-7598 Rear Seal Installer Gp. CAT Dealer Required	
1P-4000 Tool Gp - Line Boring <i>Used to bore semi-finished bearing caps</i> Engines: 3100, 3200, All 3400, All 3500 Reference: SMHS7607 Special Instruction, SEBF4500 Engine Component and Reconditioning Guide, SMHS7607 Special Instructions CAT Dealer Recommended	
2P-5517 Bearing R&I Tool <i>Used to remove and install main bearing upper halves</i> Engines: All 3500 CAT Dealer Required	

3500 Family - Tool List

CRANKSHAFT, MAIN BEARINGS & FLYWHEEL

9U-5023 Wrench - Main Bearing

Used to remove and install crankshaft main bearing

Engines: All 3500

CAT Dealer

Required



203-6597 Repair Kit - Thread

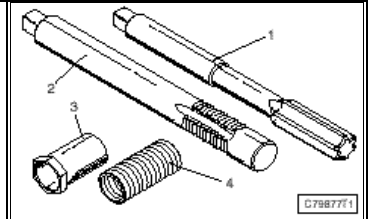
Used to repair main bearing cap bolt holes

Engines: 3500 (with 3/4" main bearing cap bolt holes)

- This kit is not serviced - see T&SPG (NENG2500) for content
- Reference: SEBF8387 Main Bearing Bolt Hole Repair

CAT Dealer

Required



203-6598 Repair Kit - Thread

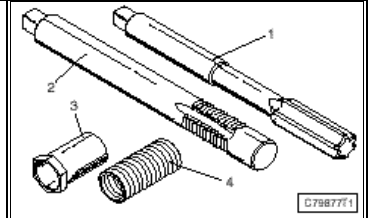
Used to repair main bearing cap bolt holes

Engines: 3500 (with 7/8" main bearing cap bolt holes)

- This kit is not serviced - see T&SPG (NENG2500) for content
- Reference: SEBF8387 Main Bearing Bolt Hole Repair

CAT Dealer

Required



CAMSHAFT & TIMING GEARS

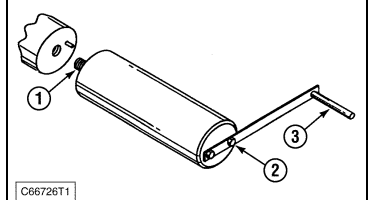
125-0200 Pilot - Camshaft

Used to pilot camshaft during removal and installation

Engines: 3500B/C

CAT Dealer

Required



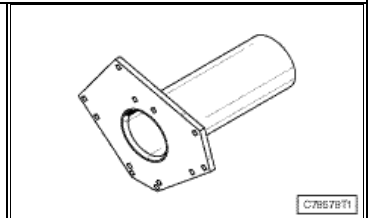
125-0201 Guide As. - Camshaft

Used to install camshaft

Engines: 3500B/C

CAT Dealer

Required



4C-9991 Idler Shaft Retrofit Tool Gp

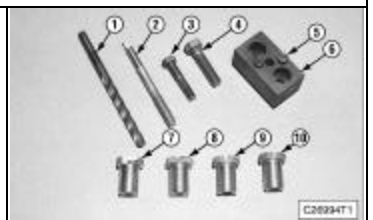
Used to retrofit idler gear shaft

Engines: 3500A

- See T&SPG (NENG2500) for details

CAT Dealer

Recommended



8B-7548 Push - Puller

Removes front crankshaft pulley and camshaft drive gear

Engines: 3208, All 3300, All 3400, All 3500, All 3600

- Item #3

CAT Dealer

Required



8T-3167 Guide As.

Used to install camshaft

Engines: 3500A, G3500

CAT Dealer

Required



3500 Family - Tool List

CAMSHAFT & TIMING GEARS

8T-3168 Pilot As.

Used to install camshaft

Engines: 3500A, G3500

CAT Dealer

Required



8T-3169 Crank As.

Used to install camshaft

Engines: All 3500

CAT Dealer

Required



6V-4077 Tool Gp. - Camshaft Bearing

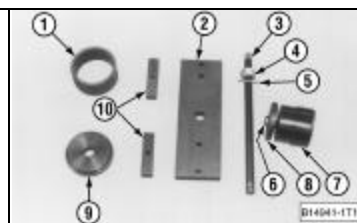
Removes and installs camshaft bearings

Engines: All 3500

• Used with 8S-2241 Tool Gp.

CAT Dealer

Required



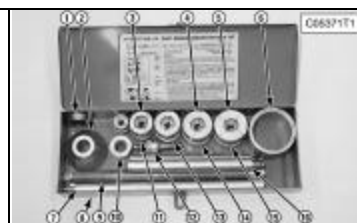
8S-2241 I & R Gp. - Camshaft Bearing

Removes and installs camshaft bearings

Engines: All engines (except 3600)

CAT Dealer

Required



125-2739 Pilot - Cam Bearing

Used to remove and install camshaft bearings

Engines: 3500B/C

• Used with 6V-4077 Camshaft Bearing Tool Gp. & 8S-2241 Camshaft Bearing I & R Gp.

CAT Dealer

Required



125-2740 Plate - Backup

Used to remove and install camshaft bearings

Engines: 3500B/C

• Used with 6V-4077 Camshaft Bearing Tool Gp. & 8S-2241 Camshaft Bearing I & R Gp.

CAT Dealer

Required



125-2741 Sleeve - Cam Bearing

Used to remove and install camshaft bearings

Engines: 3500B/C

• Used with 6V-4077 Camshaft Bearing Tool Gp. & 8S-2241 Camshaft Bearing I & R Gp.

CAT Dealer

Required



CYLINDER HEAD, VALVES & CAM FOLLOWERS

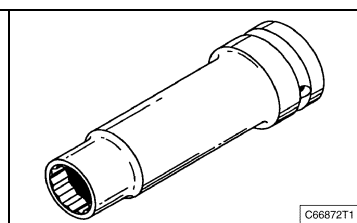
124-0662 Socket

Removes and installs cylinder head bolts (3/4"-12 point socket)

Engines: 3406C/E, 3456, C-15/16, All 3500

CAT Dealer

Recommended



3500 Family - Tool List

CYLINDER HEAD, VALVES & CAM FOLLOWERS

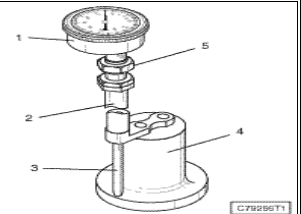
155-1536 Tool Kit - Valve Recession

Measures valve seat wear and valve projection

Engines: All 3500

CAT Dealer

Required



166-7441 Tool Gp. - Valve Seat Extractor

Used to remove valve seat inserts

Engines: All engines (except 3600)

- Reference: SMHS7935 Special Instruction

CAT Dealer

Required



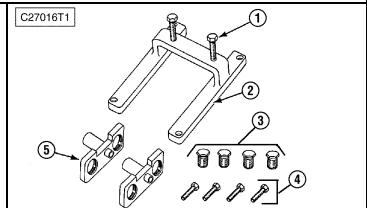
241-0124 Compressor - Valve Spring

Compresses all four valve springs on or off engine

Engines: All 3500

CAT Dealer

Required



4C-9496 Tester - Valve Spring

Tests coil springs for print conformance (545 kg max. test force)

Engines: All 3500, All 3600

CAT Dealer

Recommended



5P-3536 Gauge Gp - Valve Guide

Measures valve guides for size, taper, and roundness

Engines: 3100, 3200, All 3300, 3176/96, C7, C-10/12, C11, C13, All 3400, C-15/16, C15, All 3500

CAT Dealer

Recommended



6V-0087 Gauge - Valve Stem

Measures valve stem wear

Engines: 3100, 3200, All 3300, All 3400, All 3500

CAT Dealer

Required



6V-2032 Adapter

Used to mount brush on bench or pedestal grinder

Engines: All engines

- Used with 6V-2033 Brush
- Two required

CAT Dealer

Recommended



6V-2033 Brush

Cleans and polishes engine valve stems

Engines: All engines

- Requires (2) 6V-2032 Adapters

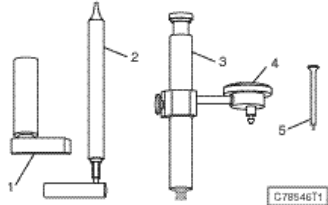
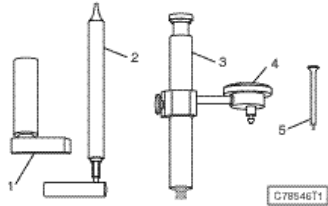
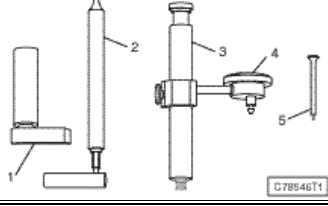
CAT Dealer

Recommended



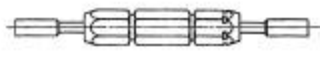
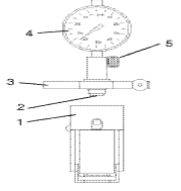
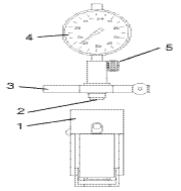
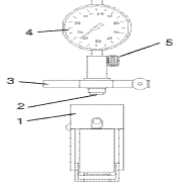
3500 Family - Tool List

CYLINDER HEAD, VALVES & CAM FOLLOWERS

6V-4009 Driver - Dowel <i>Used to install valve train bridge dowels to correct height</i> <i>Engines: All 3500</i> CAT Dealer Required	 88527-1T1
147-2056 Indicator - Dial (inch) <i>Used to set engine valve lash</i> <i>Engines: All 3500</i> • Used with 147-5482 Valve Lash Gauge Gp. • Item #4 CAT Dealer Recommended	 C78546T1
147-2059 Wrench - Torque <i>Used to torque rocker arm nuts (preset to 70 N-m)</i> <i>Engines: All 3500</i> • Used with 147-5482 Valve Lash Gauge Group CAT Dealer Recommended	No Picture Available
147-2060 Wrench - Socket <i>Used to torque rocker arm nuts</i> <i>Engines: All 3500</i> • Use with 147-5482 Valve Lash Gauge Group CAT Dealer Recommended	No Picture Available
147-5482 Gauge Gp - Valve Lash <i>Set engine valve lash using factory setting methods</i> <i>Engines: All 3500</i> • Requires 147-2056 or 147-5537 Dial Indicator CAT Dealer Recommended	 C78546T1
147-5537 Indicator - Dial (metric) <i>Used to set engine valve lash</i> <i>Engines: All 3500</i> • Used with 147-5482 Valve Lash Gauge Gp. • Item #4 CAT Dealer Recommended	 C78546T1
5P-0942 Extractor <i>Used to remove bridge dowels from cylinder head 11,13 mm (.438 inch)</i> <i>Engines: 3176/96, C-10/12, C11, C13, 3400, C-15/16, C15, All 3500</i> • Used with 5P-0944 Dowel Puller Gp. CAT Dealer Required	 5P-0942
5P-0944 Puller Gp. - Dowel <i>Used to pull 0.375" diameter dowels</i> <i>Engines: All 3400, All 3500</i> CAT Dealer Required	 7690KIT1

3500 Family - Tool List

CYLINDER HEAD, VALVES & CAM FOLLOWERS

6V-7068 Gauge <i>Used to check valve guide wear limits</i> Engines: 3300, 3400, 3508/12 • See T&SPG for application CAT Dealer Required	 C44378T1
5S-1330 Compressor - Valve Spring <i>Used to remove and install valve springs (off engine)</i> Engines: All engines (except 3600) CAT Dealer Required	 T82600T1
5P-1729 Installer Bushing <i>Used to install valve guides</i> Engines: All 3500 • Item #2 CAT Dealer Required	 T06600T1
7M-3975 Driver <i>Removes and installs valve guides</i> Engines: All 3500 • Item #1 CAT Dealer Required	 T06600T1
125-2742 Base As. (for 3500) <i>Used to measure valve lash settings</i> Engines: 3500A • Item #1 CAT Dealer Recommended	 C66735T1
125-2743 Collar Gp. <i>Used to measure valve lash setting</i> Engines: 3500A • Item #3 CAT Dealer Recommended	 C66735T1
4C-8246 Indicator <i>Used to measure valve lash settings</i> Engines: 3500A • Item #4 CAT Dealer Recommended	 C66735T1
1U-8701 Socket <i>Used to remove and install unit injector nozzle</i> Engines: 3500A CAT Dealer Recommended	 K300791-6

FUEL SYSTEM REPAIR & ADJUST

3500 Family - Tool List

FUEL SYSTEM REPAIR & ADJUST

1U-9395 Plate

Used to remove and install unit injector nozzle

Engines: 3500A

CAT Dealer

Recommended



C2701911

4C-9279 Plate

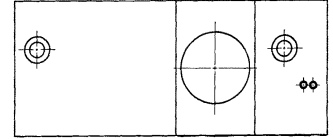
Properly positions injector rack during assembly of unit injectors

Engines: 3500A

- Used with 6V-4830 Fixture Gp.
- SEHS9287 Special Instructions

CAT Dealer

Recommended



C44391T1

6V-4062 Compressor

Used to install fuel injector springs

Engines: 3500A

CAT Dealer

Recommended

No Picture Available

6V-4172 Sleeve - Injector

Covers fuel ports when cleaning injectors

Engines: 3500

CAT Dealer

Required



B19612T1

6V-4822 Tip Driver

Separates tip assembly from nut during disassembly of injector

Engines: 3500A

CAT Dealer

Recommended



B00052T1

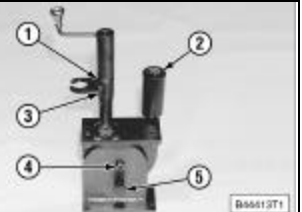
6V-4830 Fixture Gp.

Disassembles & assembles unit injectors and checks rack movement

Engines: 3500A

CAT Dealer

Recommended



B06613T1

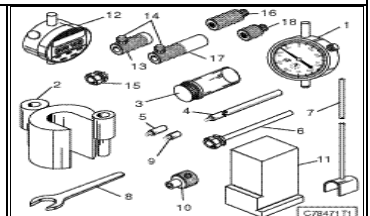
9U-5132 Tool Gp. - Timing

Tests and adjusts injector fuel timing, rack synchronization & fuel setting

Engines: 3500A

CAT Dealer

Required



C28471T1

1U-9361 Arm - Governor Torque

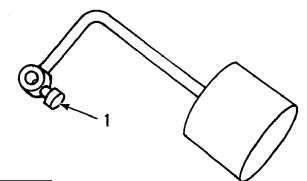
Used to test and adjust Woodward 3161 governor

Engines: 3500A, 3612/16

- Item #1 (3F7147 Bolt) included

CAT Dealer

Required



C27019T1

3500 Family - Tool List

COOLING SYSTEM

193-8100 Spanner- Impeller Nut

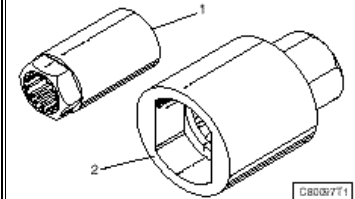
Used to disassemble and assemble seawater pump

Engines: 3500 (marine engines with 148-8000 Seawater Pump)

- Item #2
- Used with 193-8094 Spline Wrench

CAT Dealer

Required



DIAGNOSTIC TOOLS

164-2192 Adapter Gp. - Probe Self Sealing

Used with pressure gauge to check fluid-filled compartments

Engines: All engines

- Used with 5P-2720, 5P-2725 or 5P-3591 Adapters

CAT Dealer

Required



237-5130 True RMS Multimeter/IR Thermometer

Measures: AC/DC Volts, Amps, Frequency, Duty Cycle, Capacitance, Ohms, Type K

Engines: ALL

CAT Dealer

Recommended



8T-5096 Dial Indicator Test Gp.

Used to take many different linear service measurements

Engines: All engines

CAT Dealer

Required



171-4400 Communication Adapter II Gp.

Allows PC to communicate with engine data link

Engines: All engines (with electronic controls)

CAT Dealer

Required



1U-6602 Photo-Tach Gp.

Measures engine RPM

Engines: All engines

CAT Dealer

Recommended



1U-8860 Pickup Gp. - Blowby

Checks blowby volume on large engines

Engines: All 3500, All 3600

- Part of 148-2726 Maintenance tool Group
- Required 8T-2700 Blowby/Air Flow Group

CAT Dealer

Required



8T-1000 Electronic Position Indicator Gp.

Measures dynamic and static rack position & other linear measurements

Engines: All Engines (with mechanical governor)

CAT Dealer

Required



3500 Family - Tool List

DIAGNOSTIC TOOLS

8T-2700 Blowby/Air Flow Indicator Gp.

Measures engine blowby gas & air velocity through radiator

Engines: 3200, 3300, 3400, All 3500

- Part of 146-2726 Maintenance Tool Gp.
- For more information see SEHS8712 Special Instructions

CAT Dealer

Recommended



8T-5200 Signal Generator/Counter Gp.

Measures frequency signals and generates square wave signal

Engines: All engines

CAT Dealer

Recommended



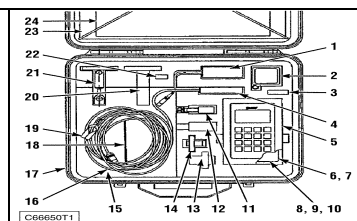
9U-7400 Multitach II Gp.

Measures engine RPM, frequency, and engine set point

Engines: All engines

CAT Dealer

Recommended



156-1070 Analyzer Gp. - Emission

Used to set-up, service, & monitor natural gas & diesel engine emissions

Engines: All engines

- For more information, see PELJ0020 IRM & NEHS0713 Tool Manual
- Alternate Tool 156-1060 Emission Analyzer Group (Diesel)

CAT Dealer

Recommended



146-4080 Multimeter Gp. - Digital (RS-232)

Measures voltage, current, resistance, duty cycle, temp, & more

Engines: All engines

- Can be used with DataView to log any type of electrical signal (Requires 146-8488 Cable)
- For more information, see JEDG6000 Brochure & NEHS0554

CAT Dealer

Recommended



212-2160 Compact Digital Multimeter

Measures voltage, current, resistance, duty cycle, temperature, & more

Engines: All Models

- Includes protective holster, (2) 1U-9535 Batteries, & Test Leads
- For More Information, See

CAT Dealer

Recommended



9U-7330 Multimeter - Fluke 87

Used to test and adjust electronic circuits

Engines: All generator sets

- See T&SPG (NENG2500) for other available models

CAT Dealer

Recommended



6V-9130 Temp Adapter Gp.

Used to measure oil, coolant or air temperatures (-50°C to 900°C)

Engines: All engines

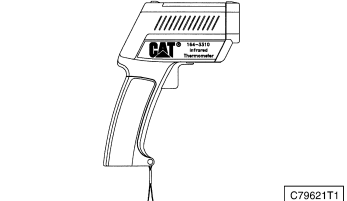
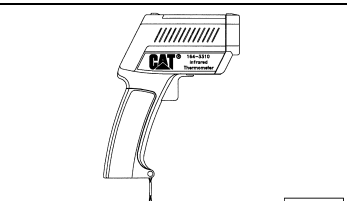
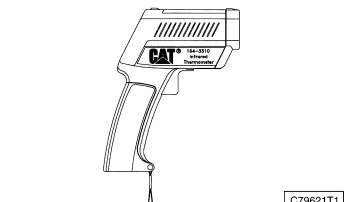
- Used with 9U-7330 or 6V-7070 Digital Multimeter Groups
- For more information, see SEHS8382

CAT Dealer

Required

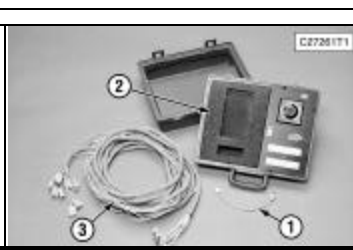
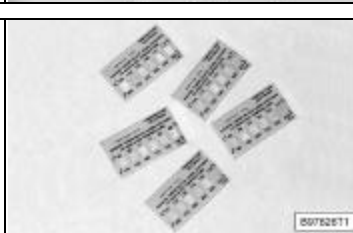
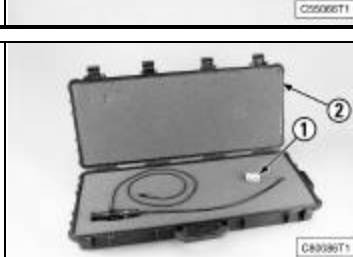


DIAGNOSTIC
TOOLS

6V-7072 Test Lead Set <i>Test Lead Kit for use with Digital Multimeters</i> Engines: All Models CAT Dealer Recommended	
7X-1710 Probe Gp. <i>Used to measure voltages without disconnecting wiring harness</i> Engines: All engines (with electronic controls) • Allows user to measure electrical signal from connector without separating connector - Used with 6V-7070, 9U-7330, & 146-4080 Digital Multimeter Gp. CAT Dealer Required	
164-3310 Infrared Thermometer <i>Measures surface temperature without contact (battery powered)</i> Engines: All engines • See T&SPG (NENG2500) for other available models - For more information, see NEHP6017 Datasheet CAT Dealer Recommended	
164-3320 Infrared Thermometer <i>Measures surface temperature without contact (110 VAC or battery)</i> Engines: All engines • See T&SPG (NENG2500) for other available models - For more information, see NEHP6017 Datasheet CAT Dealer Recommended	
166-9030 Infrared Thermometer <i>Measures surface temperature without contact (220 VAC or battery)</i> Engines: All engines • See T&SPG (NENG2500) for other available models - For more information, see NEHP6017 Datasheet CAT Dealer Recommended	
192-3750 Infrared Thermometer <i>Measures surface temperature without contacting surface</i> Engines: All engines • See T&SPG (NENG2500) for other available models - For more information, see NEHP6017 Datasheet CAT Dealer Recommended	
192-3755 Infrared Thermometer <i>Measures surface temperatures without contacting surface</i> Engines: All engines • See T&SPG (NENG2500) for other available models - For more information, see NEHP6017 Datasheet CAT Dealer Recommended	
213-4310 Infrared Thermometer <i>Non-Contact Temperature Measurement</i> Engines: All Models CAT Dealer Recommended	

3500 Family - Tool List

DIAGNOSTIC TOOLS

4C-6090 Multichannel Temp Selector <i>Measures up to sixteen temperatures individually</i> Engines: All 3500 - Used with 6V-7070 & 9U-7330 Multimeters with 6V-9129 Temperature Adapter - OR Used with 146-4080 Multimeter with type K Measurement capability CAT Dealer Required	
4C-6500 Digital Thermometer Gp. <i>Used to measure and record temperatures</i> Engines: All engines CAT Dealer Recommended	
8T-2844 Recorder Gp. <i>Measures highest surface temperature of engine components</i> Engines: All engines CAT Dealer Required	
146-1738 Borescope - Precision (12") <i>Used to make visual inspection of internal surfaces</i> Engines: All engines - See T&SPG (NENG2500) for other available models - For more information see NEHS0504 Tool Operating Manual & PELJ0046 IRM CAT Dealer Recommended	
8T-9290 Borescope - Battery Operated <i>Used to make visual inspection of internal surfaces</i> Engines: All engines - See T&SPG (NENG2500) for other available models - For more information see NEHS0504 Tool Operating Manual & PELJ0046 IRM CAT Dealer Recommended	
1U-5268 Borescope <i>Used to make visual inspection of internal surfaces</i> Engines: All engines - Used with Light Source 1U-56266(110 VAC) 190-8160 (220V) & 1U-5265 (Battery) - For more information see NEHS0504 Tool Operating Manual & PELJ0046 IRM CAT Dealer Recommended	
9U-6940 Borescope - Right-angle View <i>Used to inspect internal openings and passages</i> Engines: All engines - Used with Light Source 1U-56266(110 VAC) 190-8160 (220V) & 1U-5265 (Battery) - For more information see NEHS0504 Tool Operating Manual & PELJ0046 IRM CAT Dealer Recommended	
186-0170 Flexible Shaft Borescope <i>Used to make visual inspection of internal surfaces</i> Engines: All engines - Used with 1U-56266 Light Source (110 VAC) - Used with Light Source 1U-56266(110 VAC) 190-8160 (220V) & 1U-5265 (Battery) CAT Dealer Recommended	

3500 Family - Tool List

DIAGNOSTIC TOOLS

186-0180 Borescope - Rigid Tube <i>Used to make visual inspection of internal surfaces</i> Engines: All engines - Used with Light Source 1U-56266(110 VAC) 190-8160 (220V) & 1U-5265 (Battery) - For more information see NEHS0504 Tool Operating Manual & PELJ0046 IRM CAT Dealer Recommended	 C80277T1
1U-5266 Light Source (110 VAC) <i>Provide illumination for borescopes</i> Engines: All engines - Alternative Tool: 190-8160 Light Source (220 VAC) - Used with 1U-5268, 9U-6940, 186-0170, and 186-0180 Borescopes CAT Dealer Recommended	 C80062T1
190-8160 Light Source <i>Provide illumination for borescopes</i> Engines: All Models CAT Dealer Recommended	
1U-5265 Battery Operated Light Source <i>Portable Light Source for Field Use</i> Engines: All Models CAT Dealer Recommended	
198-4240 Digital Pressure Indicator <i>Measures Pressure, Vacuum, Differential Pressure, & Temperature</i> Engines: All Models CAT Dealer Recommended	
1U-5470 Engine Pressure Gp. <i>Checks pressures on turbocharged diesel and natural gas engines</i> Engines: All engines CAT Dealer Required	 863903T1
5P-7277 Tester - Voltage <i>Used to make quick checks for presence of voltage</i> Engines: All engines CAT Dealer Required	 A40407T1
8T-0500 Light - Continuity Testing <i>Used to test for non-energized or open circuits</i> Engines: All engines - Replaces canceled 8S-4627 Circuit Continuity Tester CAT Dealer Required	 C80267T1

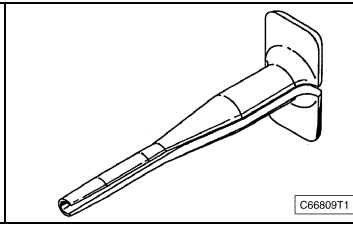
3500 Family - Tool List

DIAGNOSTIC TOOLS

177-2330 Digital Battery Analyzer <i>Used to evaluate the condition of 6 & 12 volt batteries</i> Engines: All engines CAT Dealer Recommended	 C79709T1
4C-6600 Battery Voltmeter <i>Measures battery voltage to determine state of charge</i> Engines: All engines CAT Dealer Recommended	 C26911T1
1U-7297 Coolant and Battery Tester <i>Checks coolant freezing point and battery charge condition (degrees F)</i> Engines: All Engines • Alternative Tool: 1U-7298 Coolant and Battery Tester (degrees C) CAT Dealer Required	 C79451T1
1U-7298 Coolant and Battery Tester <i>Checks coolant freezing point and battery charge condition (degrees C)</i> Engines: All Engines • Alternative Tool: 1U-7297 Coolant and Battery Tester (degrees F) CAT Dealer Recommended	 C79451T1
131-5051 DataView TechStation Gp. <i>PC based diagnostic tool that measures and records engine parameters</i> Engines: All engines • Uses standard Cat sensors and replaces 15+ green sensor boxes - For more information, see NEHS0662 Tool Operating Manual & NEHP6016 Datasheet CAT Dealer Recommended	 C79208T1
154-8102 Fuel Flow Measurement System <i>Measures diesel engine fuel burn rate on 3408/12E, 3500</i> Engines: 3408/12E (PEEC & HEUI), 3500 • Used with 154-8106 Fuel Flow Display CAT Dealer Required	 C79328T1
153-9630 Test Gp. - Sensor <i>Used to test CAT ® PWM and analog sensors</i> Engines: All engines (with electronic controls) • Used with 131-5050 or 131-5051 DataView Gp. CAT Dealer Recommended	 C79430T1
213-3274 Sensor - Pressure (100 psi) <i>Pressure sensor for use with DataView</i> Engines: All engines • Used with 131-5050 or 131-5051 DataView Gp. CAT Dealer Recommended	

3500 Family - Tool List

DIAGNOSTIC TOOLS

213-3275 Sensor - Pressure (1000 psi) <i>Pressure sensor for use with DataView</i> Engines: All engines • Used with 131-5050 or 131-5051 DataView Gp. CAT Dealer Recommended	
213-3276 Sensor - Pressure (7500 psi) <i>Pressure sensor for use with DataView</i> Engines: All engines • Used with 131-5050 or 131-5051 DataView Gp. CAT Dealer Recommended	
151-6320 Removal Tool (SXL/GXL) <i>Removes pins and sockets from Deutsch & AMP connectors</i> Engines: 3116/26, C7, C-9, 3176/96, C-10/12, C11/C13, 3406E, C-15/16, C15, 3408/12, All 3500 • For more information, see SEHS9615 Special Instruction CAT Dealer Required	
175-3700 DT Connector Service Kit <i>Used to service and repair Deutsch "DT" type connectors</i> Engines: 3116/26, C7, C-9, 3176/96, C-10/12, C11/C13, 3406E, C-15/16, C15, 3408/12, All 3500 • For more information, see SEHS9615 Special Instruction CAT Dealer Required	
190-8900 HD Connector - Field Service Kit <i>Used to service Deutsch HD type connectors</i> Engines: 3116/26, C7, C-9, 3176/96, C-10/12, C11/C13, 3406E, C-15/16, C15, 3408/12, All 3500 • For more information, see SEHS9615 Special Instruction CAT Dealer Required	
129-2018 Cable As. - Power <i>Provides access to data link from 40-pin ECM and powers service tools</i> Engines: 3100, C-10/12, 3406E, 3456 CAT Dealer Recommended	
134-5195 Cable As. - Adapter (40 pin) <i>Adapts 7X-1715 Cable Assembly to a 40-pin CD-keyed connector</i> Engines: All 3500, All 3600 CAT Dealer Recommended	
139-4166 (CAT/ATA) Universal Cable <i>Connects ATA data-link or the CAT (CDL) data-link to 7X-1700 Comm Adapter</i> Engines: All engines (with electronic controls) CAT Dealer Recommended	

3500 Family - Tool List

DIAGNOSTIC TOOLS

167-9225 Harness As.

Provides access during cranking to ECM with 70-pin Data Link
Engines: 3126B, C-9, C-10/12, C11/C13, 3406E, C15

CAT Dealer

Recommended



C79066T1

208-0059 Cable Assembly

70 Pin Breakout T Cable Assembly

Engines:

- Used to provide test point for all individual wires in Engine wiring harness of ADEM III
- Connects between ECM and main wiring harness

CAT Dealer

Recommended



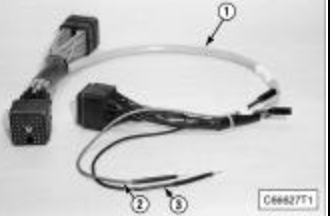
7X-1715 Cable As. - Small (40 Pin)

Provides tests points for individual wires in wiring harness

Engines: 3126B, 3176/96, C-10/12, 3400E, C-15/16

CAT Dealer

Recommended



C68627T1

8T-0450 Thread Identification Kit

Used to determine thread sizes

Engines: All engines

CAT Dealer

Recommended



C6444T1

6V-7898 Dial Bore Gauge - Metric

Measures internal diameters (50 to 200 mm) & depths (13 to 300 mm)

Engines: All engines

- Used with 6V-7899 Size Setting Fixture
- See T&SPG (NENG2500) for other available models

CAT Dealer

Recommended



B7895T1

LIFTING, POSITIONING & HOLDING TOOLS

8S-6691 Stand Group - Cylinder Head

Supports cylinder head on work bench during repair process

Engines: All engines (except 3600)

- Two required

CAT Dealer

Recommended



T06645T1

4C-9832 Roll-Over Stand - Large Engine

Used for disassembly and assembly of engine

Engines: 3408/12, 3500

- See T&SPG (NENG2500) for required engine adapter plates

CAT Dealer

Recommended



C27042T1

HAND TOOLS

1P-1861 Retaining Ring Pliers

Used to remove and install retaining rings (No. 25)

Engines: 3200, 3300, 3176/96, C-10/12, C11/C13, 3400, C-15/16, C15, All 3500

CAT Dealer

Required



C25885T1

3500 Family - Tool List

PUMPS, HYDRAULIC CYLINDERS & PULLERS

1P-0820 Hydraulic Puller Gp.

Used to push or pull bearings, gears, shafts, or other press fit parts

Engines: All engines

CAT Dealer

Required

A92066T1-4



1P-2322 Combination Puller (2 or 3 Jaw)

General purpose puller

Engines: All engines

CAT Dealer

Recommended



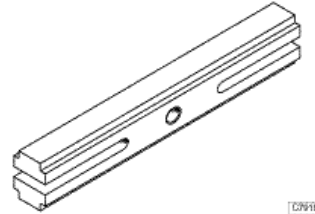
3H-0465 Plate

Used with tooling for removal and installation of gears, bearings, etc.

Engines: All engines

CAT Dealer

Recommended



9U-6600 Hand Pump Gp.

Manually operated hydraulic pump (10,000 psi)

Engines: All engines

- See T&SPG (NENG2500) for other available models

CAT Dealer

Required



1P-2320 Combination Puller

Combination 2 or 3 jaw puller (5 ton capacity)

Engines: All engines

CAT Dealer

Recommended



MISC. TOOLS & SUPPLIES

1P-0510 Driver Gp. - Bearing and Seal

General purpose bearing and seal driver kit

Engines: All engines

CAT Dealer

Required



1P-0520 Driver Gp - Bearing and Seal

Installs bearings, races, and seals

Engines: All engines (except 3000)

CAT Dealer

Required



5F-7465 Puller

Used to remove gears, pulleys, and flanges

Engines: All engines

CAT Dealer

Recommended



3500 Family - Tool List

MISC. TOOLS & SUPPLIES

9S-9155 Spacer

Used to install bearings and seals

Engines: 3176/96, C-10/12, 3306B/C, 3408/12, All 3500

- Part of 1P-0500, 1P-0510 & 1P-0520 Driver Gp.

CAT Dealer

Recommended



FT1561 Cabinet - Storage - Cylinder Liner

Keeps cylinder liners clean after reconditioning

Engines: All 3500

CAT Dealer

Recommended



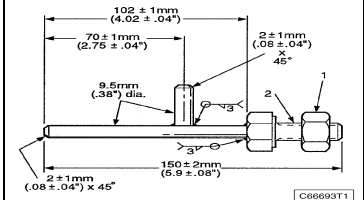
FT2449 Bracket - Indicator

Checks engine to generator alignment

Engines: 3516 (locomotive engine)

CAT Dealer

Recommended



238-9586 Engine Turning Tool

Used to manually rotate engine crankshaft.

Engines: C-9 thru C-16 and 3300 thru 3500

- Mount to tool access opening in flywheel housing
- Needle bearings enable smoother turning of crankshaft

CAT Dealer

Required



9S-9082 Turning Tool

Used to manually rotate engine crankshaft

Engines: C-9 thru C-16 and 3300 thru 3500

CAT Dealer

Required

