

#### **SERVICE**

# **- Equipment Protection Plan**

Global

**Machines** 

# Hydraulic and Technology (Cat® Connect Productivity Solutions) Equipment Protection Plan (EPP)

#### Overview

This coverage bulletin defines the hydraulic & technology components that are covered under various new, used and rebuild equipment programs offered through Caterpillar. This bulletin defines certain components that are covered under Hydraulic and Technology Equipment Protection Plan (EPP) for the following Cat® Connect Productivity Solutions: Compact, Grade, Link, and Payload.

Refer to the Standard Machine Warranty and applicable program bulletins for covered component failures during the standard warranty period and refer to this Hydraulic and Technology EPP for covered component failures during the EPP coverage period.

#### Components Covered Under Hydraulic and Technology EPP

EPP provides dealer reimbursement for parts and/or labor for covered defects in Caterpillar material and manufacturer workmanship. Repairs must be completed by a Cat authorized dealer.

Coverage for defects in Cat material and manufacturer workmanship as defined by EPP means the failure of any original or Cat approved replacement part to work as designed in normal service, providing proper maintenance was received as recommended in the applicable Caterpillar manuals, including the Operation and Maintenance Manual (OMM) and other applicable service literature. Mechanical breakdown means the failure of any original or replacement part covered by EPP to work as it was designed in normal service, providing it has received customary maintenance as recommended by the manufacturer. Any mechanical breakdown and resultant damage caused by failure of a non-covered component (including Yellowmark<sup>TM</sup>, A Caterpillar Brand, and Cat<sup>®</sup> Classic brand parts) are not eligible.

**Hydraulic and Technology EPP** includes the components covered by Powertrain EPP (Bulletin 8.01), Hydraulic EPP (Bulletin 8.02), and certain Cat Connect Productivity Solutions components identified by this bulletin.

See the Parts Book Component Codes section below.

➤ 08.10-<del>03</del> (11/19)

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➤ Indicates change.

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of Caterpillar and may not be used without permission.

Dealer and Dealers are defined as any Cat Authorized Dealer or Cat Authorized Repair Representative.

#### Components Excluded Under Hydraulic and Technology EPP

The following are components commonly mistaken as covered Technology Components. The following components are excluded:

- All Powertrain exclusions in Bulletin 8.01 and Hydraulic Bulletin 8.02 apply
- Elective software updates that are not required to maintain the current operating condition of the machine
- Technology components installed after delivery to the end customer
- Technology that is considered aftermarket, covered by other warranty statements, or covered by another manufacturer warranty. Example: Trimble's Accugrade product
- Software flashing for technology listed unless performed by an authorized dealer to fix a defect in material and manufacturer workmanship

#### **General Exclusions and Limitations**

#### Hydraulic and Technology EPP does not cover the following:

- Operator abuse, neglect, improper or abusive use of the equipment including, but not limited to, the failure to
  perform the recommended preventive maintenance as specified in the applicable Caterpillar manuals, including the
  Operation and Maintenance Manual (OMM)
- · Applications not approved by Caterpillar
- Operation beyond the design and/or capacity of the machine
- Wear-out and normal deterioration in performance, accelerated wear-out of components due to operating technique or application; including, but not limited to, oil consumption and gasket or seal leaks
- Chemical corrosion and physical or mechanical erosion
- Unauthorized fuel setting changes
- A mechanical breakdown caused by, or a result of, acts of war, vandalism, riot, theft, explosion, collision, fire and/or
  any other act of nature, person or vermin
- · Operating equipment with improper, contaminated, or improper levels of fuel or fluids, or the use of improper filters
- Modifications, unless the modifications were authorized at the request of Caterpillar and performed at an approved repair facility
- Replacement, adjustments, or alignment or any part not covered by this agreement, lube oils, grease, coolant, or air conditioner refrigerant, alternator, starter, air compressor, air conditioner, compressor, and other bolt-on attachments, unless required in conjunction with the repair of a covered part
- Normally scheduled preventive maintenance or maintenance services, including, but not limited to, valve lash adjustments and maintenance items including filters, fuel nozzles, fuel injectors, thermostats, and seals and gaskets
- Operating at performance settings other than the standard Caterpillar specification
- Accelerated wear-out of components due to operating technique or application
- Physical damage to any product resulting from causes other than mechanical breakdown
- · Any repairs if the service meter has been stopped or altered or misrepresents the equipment's actual usage
- Mechanical transportation or towing costs or field service travel expenses, unless Travel EPP (Americas North, EAME) is purchased. See bulletin 8.04
- Loss of time, inconvenience, downtime or downtime-related expenses or other incidental or consequential loss that results from a defect in material or workmanship
- Any costs incurred to improve operating performance due to normal wear and tear
- Storage or miscellaneous shop supplies
- Freight
- Taxes
- Any cost covered by any warranty of the manufacturer including emissions warranty or repairer's guarantee regardless of whether the warranty or repairer's guarantee is honored

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- Performance complaints including, but not limited to, adjustments to fuel settings or electronic unit injectors to comply with emissions standards under Environmental Protection Agency or similar national, federal, provincial or state law
- Any costs incurred for the manufacturer to comply with emissions standards under the Environmental Protection Agency or similar national, federal, provincial or state law
- Failure to use fuels and lubricants that meet or exceed the minimum specification requirements of the manufacturer as specified in the OMM or other technical bulletins
- · Dealer rework or dealer workmanship issues relating to previous repairs
- Modifications including any reconfiguration of or addition to the equipment
- Failure of and resultant damage caused by: attachments, implements, work tools and modifications, including both
  serialized or non-serialized Cat products added to the equipment. Examples include but are not limited to: booms,
  sticks, buckets, screeds, winches, augers, ground engagements, hitches, etc. Separate and optional EPP coverage
  may be available for certain products outside of the scope of this EPP
- Non-serialized Work Tools and other attachments shipped with the equipment are generally excluded from EPP coverage unless specifically identified as covered components within applicable warranty statement
- Components or Systems Covered by Other Caterpillar Warranty Statements and are therefore excluded from EPP.
   Examples include, but are not limited to:
  - Batteries
  - Cat Work Tools
  - Mobil-trac<sup>™</sup> belts
  - Rubber track used on Compact Construction Equipment (CCE).
  - Machine Control & Guidance
  - Cat Tires
  - Service Tools and Supplies
  - Yellowmark™
  - Moving Undercarriage (Refer to Cat Parts Warranty and Undercarriage Assurance bulletins)
  - Ground Engaging Tools (GET) (Refer to bulletin 4.03)
  - Long-Life Weld-On Landfill Compactor Plus Tip (Refer to bulletin 4.03)
- Components Covered by Any Other Manufacturers' Warranty Statements and are therefore excluded from Premier Coverage. If an Original Equipment Manufacturer (OEM) other than Caterpillar has a warranty in place for the equipment, claims should be filed and settled with that OEM prior to submitting supplemental EPP claims. Examples include, but not limited to:
  - Other Manufacturer Tires
  - Other Manufacturer Hammers
  - Timberking™ Products
  - Forestry Work Tools
  - Ag Products
  - Trimble

#### **Emissions Components**

In U.S., Canada, Virgin Islands, Puerto Rico, and South Korea certain parts and/or components may qualify for Manufacturer Emissions Warranty in accordance with the United States Environmental Protection Agency (US EPA) and the California Air Resources Board (ARB). The South Korea Clean Air Conservation Act requires Caterpillar to provide an emission warranty to end users; for engines used in certain construction equipment operated and repaired in South Korea.

Bulletin 7.01 explains the details of Manufacturer Emissions Warranty and the claiming procedures for emissions components.

Unless otherwise specified, upon expiration of the Manufacturer Emissions Warranty, certain parts are included in EPP and covered for defects in Cat material and manufacturer workmanship according to the normal EPP guidelines. See applicable EPP Coverage Bulletins for information regarding emissions components that are beyond the terms of Manufacturer Emissions Warranty and are enrolled in a Caterpillar EPP.

# Claiming Practices for Service Letters PIP/PSP on Machines Covered by the New Machine EPP

- Product Improvement Programs (PIP) and Product Support Programs (PSP), performed on equipment covered by this program must be claimed under the appropriate PIP or PSP
  - Do not claim these repairs under the EPP. Refer to Bulletin 1.16 Service Letters (PIP/PSP) for additional information
  - EPP only applies to the customer participation portion of the after-failure PSP that exceeds the Service Letter limit

#### Wear-Out and Extent of Coverage

Wear-out and/or deterioration of any component are not covered by Hydraulic and Technology EPP.

The intent is not to restore the product to a "like new" condition, but rather to restore the product to its operating condition just prior to the covered failure. **Hydraulic and Technology EPP** covers only the repair or replacement of the failed component and any resultant damaged parts. Other parts removed in the process of repair will be reinstalled as is, unless the customer authorizes and funds any additional replacement cost.

**Example:** While performing a Hydraulic and Technology - EPP program repair of a defective position sensing cylinder, the dealer service technician notices the wiring harness has cuts from falling rocks. In addition to repairing the defective position sensing cylinder, the service technician replaces the wiring harness to avoid future downtime.

In this example the wiring harness cannot be claimed to Caterpillar because it did not have a defect nor was it damaged as a result of the defective position sensing cylinder. The wiring harness was repaired or replaced as a result of the Customer Responsibilities for assuring all recommended preventative maintenance is performed.

**NOTE:** If the position sensing cylinder failed due to abuse (damage to the cylinder from falling rocks), the repair of the position sensing cylinder and resultant damage would not be due to a Caterpillar defect and therefore is not a covered failure.

#### **Customer's Responsibilities**

- Operating the product properly and within the limits of intended capacity and application
- Fueling, lubricating, adjusting, operating, and maintaining the equipment as instructed by the dealer and in accordance with the recommendations set forth in the applicable Caterpillar manuals, including the OMM and other applicable service literature
- Notifying the dealer promptly if a problem exists
- Promptly making the product available to the dealer for warranty repairs and product improvement Programs
- Assuring all recommended preventative maintenance is performed at the specified service intervals as
  described in the OMM. Preventative maintenance includes, but is not limited to, the servicing, adjusting
  and/or replacing of specified components

**Hydraulic and Technology EPP** does not cover failure of any components if Customer's Responsibilities are not followed. The dealer may be required to provide proof of compliance with the maintenance schedules, at the time of a failure. Proof may include receipts, copies of work orders, or invoices showing the performed maintenance services.

#### Dealer's Responsibilities

- Confirm that the equipment has not experienced a failure prior to the EPP coverage start date. If a failure
  exists, the equipment must be repaired prior to registering it for EPP
- · Repair equipment using the most economical method and install only genuine Cat parts
- Keep on file the applicable inspection and all parts and labor invoices relative to required repairs
- Pay for any loss in excess of what is covered by EPP if broader coverage was offered to the customer
- · Register equipment for EPP and pay applicable fees

#### **Parts Book Component Codes**

On most pages of all Cat Parts Books (paper or electronic), is printed a four-digit numeric Service Management Control System (SMCS) component code. These component codes are used to describe the area of primary use for the parts and/or components listed on that page.

Following are the SMCS component codes that Caterpillar considers part of Hydraulic and Technology EPP. Each component code listed on the parts book page should be compared to this list of acceptable Hydraulic and Technology EPP components.

**NOTE:** Sometimes a Parts Book page with an acceptable Hydraulic and Technology EPP component code will include parts that are not covered or may include parts that are broken out on another Parts Book page. Additionally, there may be instances of a non-acceptable component code containing parts that may qualify for Hydraulic and Technology EPP coverage. For clarification regarding coverage, please submit a ticket through the Warranty Service Desk.

#### **Use of Parts Book Component Code on Labor Lines**

Some codes may indicate the use of a substitute code. Substitute codes apply only when using the component code on a labor expense line, if labor reimbursement is applicable.

**Example:** 1299 Hydraulic Timing Advance (use 1272)

Using a canceled component code on a labor expense line will cause the entire service claim to be canceled.

NOTE: Refer to Bulletins 1.06 and 1.09 for proper group number and labor line SMCS code usage.

The table below lists the SMCS component codes in numeric order that Caterpillar considers part of Hydraulic and Technology EPP. For qualification, the component code listed on the parts book page should be compared to this list of acceptable hydraulic or technology components.

The SMCS component codes can be used as a guide for helping to determine if a failed part may be considered part of Hydraulic and Technology EPP coverage.

#### SMCS Codes - Technology Coverages

· ·	ed only for the following: Cat Connect Proor may not be applicable to Powertrain a	
1408 Wiring Harness - included only if part of the Compact, Grade, Link, and Payload. Harness must be connected directly to the component.	5645 Sensor, Grade, Mechanical (Averaging Ski/Sensing Wheel/Grade Control)	5705 Control Group-Joystick (only if controlling the above-mentioned Productivity components)
5741 Autodig Control	7008 Remote Control System	7009 Laser Receiver
7010 Satellite Receiver	7215 Sensor, Grade, Sonic (Suspension Control)	7219 Control, Slope, Digital (Cross Slope Control)
7220 Cat Grade Control Cross Slope (Automatic Grade Control)	7332 Control Group-Payload (Electric Switch (Manual)	7347 Displays/Monitors
7426 Box Group-J (Junction Box)	7451 Control Group-B (Instrument Panel/Control Panel)	7475 Payload Monitor System
7490 Grade Control Group (Instrument Panel/Control Panel)	7493 Monitor Group-Operator (Ground Speed Sensor)	7494 Monitor Arrangement-Payload (Payload Monitor System)
7601 Vital Information Management System (VIMS)	7602 Global Positioning System Electronic Control	7603 Vital Information Display System (VIDS)
7604 Computer Aided Earthmoving System (CAES)	7606 Product Link System	7620 Machine Software
7632 Road Analysis Control	7852 VIMS (Compactometer)	733T Control Group (2-Way Radio)

#### **Additional Coverage Clarifications**

- Electronic Controls and Sensors which function to direct power for the purpose of moving the machine are included. This includes power shift controls, engine pressure controls, differential lock, finger-tip controls, wiring connectors that are part of the designated Powertrain components
- Hydraulic Valves & Controls includes specified valve parts for directing or controlling hydraulic fluid for steering and implements, including automatic blade controls and bucket position controls

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#### **SERVICE**

# **Equipment Protection Plan**

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### **Hydraulic Equipment Protection Plan (EPP)**

Effective and Applicable to Hydraulic Mining Shovels (HMS) with Delivery Dates Prior to 31DEC2018. Coverages enrollments for HMS prohibited after this date.

#### Overview

This coverage bulletin defines the hydraulic components that are covered under various new, used and rebuild equipment programs offered through Caterpillar. Hydraulic components are the components on equipment that are associated with steering and implement control.

Refer to the Standard Machine Warranty and applicable program bulletins for covered component failures during the standard warranty period and refer to this Hydraulic EPP for covered component failures during the EPP coverage period.

#### **Components Covered Under Hydraulic EPP**

EPP provides dealer reimbursement for parts and/or labor for covered defects in Caterpillar material and manufacturer workmanship. Repairs must be completed by a Cat® authorized dealer.

Coverage for defects in Cat material and manufacturer workmanship as defined by EPP means the failure of any original or Cat approved replacement part to work as designed in normal service, providing proper maintenance was received as recommended in the applicable Caterpillar manuals, including the Operation and Maintenance Manual (OMM) and other applicable service literature. Mechanical breakdown means the failure of any original or replacement part covered by EPP to work as it was designed in normal service, providing it has received customary maintenance as recommended by the manufacturer. Any mechanical breakdown and resultant damage caused by failure of a non-covered component (including Yellowmark<sup>TM</sup>, A Caterpillar Brand, and Cat<sup>®</sup> Classic brand parts) are not eligible.

Hydraulic EPP includes the components covered by Powertrain EPP (Bulletin 8.01) and additional components identified by this bulletin.

See the Parts Book Component Codes section below.

**►** 08.02-04 (11/19)

➤ Indicates change.

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#### **Components Excluded Under Hydraulic EPP**

The following are components commonly mistaken as covered Hydraulic Components. The following components are excluded:

- All Powertrain Coverage (Service) Bulletin 8.01 exclusions apply
- Hydraulic Line Quick Connect/Disconnect Components
- Winch Pumps & Valves
- Hydraulic Brake System Components While part of the hydraulic system, they are not associated with machine steering or implement control
- Hydraulic Actuated Work Tools and other attachments which are individually serialized and warranted by Caterpillar under separate warranty statements
- Hydraulic Hoses and Hydraulic Oil Coolers are excluded for the 6000 series Hydraulic Mining Shovels

#### **General Exclusions and Limitations**

Hvdraulic - EPP does not cover the following:

- Operator abuse, neglect, improper or abusive use of the equipment including, but not limited to, the failure to perform the recommended preventive maintenance as specified in the applicable Caterpillar manuals, including the Operation and Maintenance Manual (OMM)
- · Applications not approved by Caterpillar
- Operation beyond the design and/or capacity of the machine
- Wear-out and normal deterioration in performance, accelerated wear-out of components due to operating technique or application; including but not limited to oil consumption and gasket or seal leaks
- Chemical corrosion and physical or mechanical erosion
- Unauthorized fuel setting changes
- A mechanical breakdown caused by, or a result of, acts of war, vandalism, riot, theft, explosion, collision, fire and/or any other act of nature, person or vermin
- Operating equipment with improper, contaminated, or improper levels of fuel or fluids, or the use of improper filters
- Modifications, unless the modifications were authorized at the request of Caterpillar and performed at an approved repair facility
- Replacement, adjustments, or alignment or any part not covered by this Agreement, and lube oils, grease, coolant, or air conditioner refrigerant, alternator, starter, air compressor, air conditioner, compressor, and other bolt-on attachments, unless required in conjunction with the repair of a covered part
- Normally scheduled preventive maintenance or maintenance services, including, but not limited to, valve lash adjustments and maintenance items including filters, fuel nozzles, fuel injectors, thermostats, and seals and gaskets
- Operating at performance settings other than the standard Caterpillar specification
- Accelerated wear-out of components due to operating technique or application
- Physical damage to any product resulting from causes other than mechanical breakdown
- Any repairs if the service meter has been stopped or altered or misrepresents the equipment's actual usage
- Mechanical transportation or towing costs or field service travel expenses, unless Travel EPP (Americas North, EAME) is purchased. See bulletin 8.04
- Loss of time, inconvenience, downtime or downtime-related expenses or other incidental or consequential loss that results from a defect in material or workmanship
- · Any costs incurred to improve operating performance due to normal wear and tear
- Storage or miscellaneous shop supplies

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- Freight
- Taxes
- Any cost covered by any warranty of the manufacturer including emissions warranty or repairer's guarantee regardless of whether the warranty or repairer's guarantee is honored
- Performance complaints including, but not limited to, adjustments to fuel settings or electronic unit injectors to comply with emissions standards under Environmental Protection Agency or similar national, federal, provincial or state law
- Any costs incurred for the manufacturer to comply with emissions standards under the Environmental Protection Agency or similar national, federal, provincial or state law
- Failure to use fuels and lubricants that meet or exceed the minimum specification requirements of the manufacturer as specified in the operations manual or other technical bulletins
- Dealer rework or dealer workmanship issues relating to previous repairs
- Modifications including any reconfiguration of or addition to the equipment
- Failure of and resultant damage caused by: attachments, implements, work tools and modifications, including both serialized or non-serialized Cat products added to the equipment. Examples include but are not limited to: booms, sticks, buckets, screeds, winches, augers, ground engagements, hitches, etc. Separate and optional EPP coverage may be available for certain products outside of the scope of this EPP
- Non-serialized Work Tools and other attachments shipped with the equipment are generally excluded from EPP coverage unless specifically identified as covered components within applicable warranty statement
- Components or Systems Covered by Other Caterpillar Warranty Statements and are therefore excluded from EPP. Examples include, but are not limited to:
  - Batteries
  - Cat Work Tools
  - Mobil-trac<sup>™</sup> belts
  - Rubber track used on Compact Construction Equipment (CCE).
  - Machine Control & Guidance
  - Cat Tires
  - Service Tools and Supplies
  - Yellowmark™
  - Moving Undercarriage (Refer to Cat Parts Warranty and Undercarriage Assurance bulletins)
  - Ground Engaging Tools (GET) (Refer to bulletin 4.03)
  - Long-Life Weld-On Landfill Compactor Plus Tip (Refer to bulletin 4.03)
- Components Covered by Any Other Manufacturers' Warranty Statements and are therefore excluded from Premier Coverage. If an Original Equipment Manufacturer (OEM) other than Caterpillar has a warranty in place for the equipment, claims should be filed and settled with that OEM prior to submitting supplemental EPP claims. Examples include, but not limited to:
  - Other Manufacturer Tires
  - Other Manufacturer Hammers
  - Timberking™ Products
  - Forestry Work Tools
  - Ag Products
  - Trimble

#### **Emissions Components**

In U.S., Canada, Virgin Islands, Puerto Rico, and South Korea certain parts and/or components may qualify for Manufacturer Emissions Warranty in accordance with the United States Environmental Protection Agency (US EPA) and the California Air Resources Board (ARB). The South Korea Clean Air Conservation Act requires Caterpillar to provide an emission warranty to end users; for engines used in certain construction equipment operated and repaired in South Korea. Bulletin 7.01 explains the details of Manufacturer Emissions Warranty and the claiming procedures for emissions components.

Unless otherwise specified, upon expiration of the Manufacturer Emissions Warranty, certain parts are included in EPP and covered for defects in Cat material and manufacturer workmanship according to the normal EPP guidelines. See applicable EPP Coverage Bulletins for information regarding emissions components that are beyond the terms of Manufacturer Emissions Warranty and are enrolled in a Caterpillar EPP.

## Claiming Practices for Service Letters PIP/PSP on Machines Covered by the New Machine EPP

- Product Improvement Programs (PIP) and Product Support Programs (PSP), performed on equipment covered by this program must be claimed under the appropriate PIP or PSP
  - Do not claim these repairs under the EPP. Refer to Bulletin 1.16 Service Letters (PIP/PSP) for additional information
  - EPP only applies to the customer participation portion of the after-failure PSP that exceeds the Service Letter limit

#### Wear-out and Extent of Coverage

Wear-out and/or deterioration of any component are not covered by **Hydraulic EPP**.

The intent is not to restore the product to a "like new" condition, but rather to restore the product to its operating condition just prior to the covered failure. **Hydraulic EPP** covers only the repair or replacement of the failed component and any resultant damaged parts. Other parts removed in the process of repair will be reinstalled as is, unless the customer authorizes and funds any additional replacement cost.

Example: While performing a Hydraulic EPP repair of a leaking bucket cylinder, the dealer service technician notices the hydraulic hoses have cuts from falling rocks. The service technician also notices some wear (within acceptable limits) in the rod eye bearing. In addition to repairing the leaking bucket cylinder, the service technician replaces the hydraulic hoses and rod eye bearing to avoid future downtime.

In this example the hydraulic hoses and rod eye bearing cannot be claimed to Caterpillar because they did not have a defect nor were they damaged as a result of the leaking bucket cylinder. They were repaired or replaced as a result of Customer Responsibilities for assuring all recommended preventive maintenance is performed.

**NOTE:** If the bucket cylinder seals failed due to abuse (damage to the cylinder rod from falling rocks), the repair of the leaking lift cylinder and resultant damage would not be due to a Caterpillar defect and therefore is not a covered failure.

#### **Customer's Responsibilities**

- · Operating the product properly and within the limits of intended capacity and application
- Fueling, lubricating, adjusting, operating, and maintaining the equipment as instructed by the dealer and in accordance with the recommendations set forth in the applicable Caterpillar manuals, including the OMM and other applicable service literature
- Notifying the dealer promptly if a problem exists
- Promptly making the product available to the dealer for warranty repairs and product improvement
- Programs
- Assuring all recommended preventative maintenance is performed at the specified service intervals as described in the OMM. Preventative maintenance includes, but is not limited to, the servicing, adjusting and/ or replacing of specified components

Hydraulic EPP does not cover failure of any components if Customer's Responsibilities are not followed. The dealer may be required to provide proof of compliance with the maintenance schedules, at the time of a failure. Proof may include receipts, copies of work orders, or invoices showing the performed maintenance services.

#### **Dealer's Responsibilities**

- Confirm that the equipment has not experienced a failure prior to the EPP coverage start date. If a failure
  exists, the equipment must be repaired prior to registering it for EPP
- Repair equipment using the most economical method and install only genuine Cat® parts
- Keep on file the applicable inspection and all parts and labor invoices relative to required repairs
- · Pay for any loss in excess of what is covered by EPP if broader coverage was offered to the customer
- Register equipment for EPP and pay applicable fees

#### **Parts Book Component Codes**

On most pages of all Cat Parts Books (paper or electronic), is printed a four-digit numeric Service Management Control System (SMCS) component code. These component codes are used to describe the area of primary use for the parts and/or components listed on that page.

Following are the SMCS component codes that Caterpillar considers part of Hydraulic EPP. Each component code listed on the parts book page should be compared to this list of acceptable Hydraulic EPP components.

**NOTE:** Sometimes a Parts Book page with an acceptable Hydraulic EPP component code will include parts that are not covered or may include parts that are broken out on another Parts Book page. Additionally, there may be instances of a non-acceptable component code containing parts that may qualify for Hydraulic EPP coverage. For clarification regarding coverage, please submit a ticket through the Warranty Service Desk.

#### **Use of Parts Book Component Code on Labor Expense Lines**

Some codes may indicate the use of a substitute code. Substitute codes apply only when using the component code on a labor expense line, if labor reimbursement is applicable.

Example: 1299 Hydraulic Timing Advance (use 1272)

Using a canceled component code on a labor expense line will cause the entire service claim to be canceled.

NOTE: Refer to Bulletins 1.06 and 1.09 for proper group number and labor line SMCS code usage.

On the following page are the SMCS component codes in numeric order that Caterpillar considers part of Hydrualic EPP. For qualification, the component code listed on the parts book page should be compared to this list of acceptable hydraulic or technology components.

The SMCS component codes can be used as a guide for helping to determine if a failed part may be considered part of Hydraulic EPP coverage.

SMCS CODES - Hydraulic Co	overage:	
	Lubrication System	
1306 Hydraulic Oil Base	Lubrication System	
	, l	
	Cooling System	
1374 Hydraulic Oil Cooler		
	T	
2010 D : T : O'II:	Transmission and Drive Line	<u> </u>
3016 Drive Train Oil Lines	3154 Transmission Oil Lines	
	Steering System	
4303 Steering Cylinder	4304 Steering Lines or Hoses	4306 Steering Pump
4307 Steering Cylinder 4307 Steering Valve	4311 Steering Booster	4312 Steering Metering Pump
4315 Servo Steering Cylinder	4317 Steering Gear & Valve	4320 Steering Flow Divider Valve
4322 Steering Relief Valve	4324 Secondary Steering Pump	4330 Steering Neutralizer Valve
4331 Steering Accumulator	4332 Steering Hydraulic Tank	4337 Steering Pressure Reducing
4331 Steeling Accumulator	4332 Steering Frydraulic Tarik	Valve
4339 Secondary Steering Diverter Valve	4340 Steering Counterbalance Valve	4341 Steering Cooler Pump
4342 Steering Pilot Valve	4343 Steering Control	4344 Steering Charge Pump
4346 Steering Oil Cooler	4347 All Wheel Steer Valve	4349 Steering Selector & Pressure Control Valve
	Hydraulic System	T
5051 Hydraulic Control Valve	5052 Hydraulic Motor - Vane Type	5054 External Control Valve
5055 Hydraulic Pump - Vane Type	5056 Hydraulic Tank	5057 Hydraulic Hoses or Lines (Hydraulic Hoses excluded for the 6000 series Hydraulic Mining Shovels)
5058 Hydraulic Motor - Piston Type	5059 Pilot Control Valve	505C Piston Cylinder
505Q Quick Release Valve	505U Unloading Valve	5060 Swivel
5061 Hydraulic Motor - Gear Type	5063 Implement Control	5064 Combination Valve
5065 Selector Valve	5066 Diverter Valve	5067 Check Valve
5069 Main System Relief Valve	506G Gear Pump & Motor	506P Implement Priority Valve
5070 Hydraulic Pump - Piston Type	5071 Hydraulic Oil Cooler Bypass Valve	5072 Pilot System Relief Valve
5073 Hydraulic Pump - Gear Type	5074 Thermal Bypass Valve	5076 Hydraulic Tank Valve
5077 Hydraulic Accumulator (excluded for the 6000 series Hydraulic Mining Shovels)	5078 Hydraulic Actuator	5079 Shuttle Valve
507G Piston & Gear Pump	507V Piston & Vane Pump	5080 Make-Up Valve
5081 Hydraulic Accumulator Charging Valve	5082 Gerotor Motor	5083 Hydraulic Hoist Pump
5084 Implement Pump	5085 Pilot Pump	5086 Pressure & Flow Compensator Valve

5087 Cooling & Test Manifold	5088 Pilot Test Valve	5089 Blocker Valve
5090 Line Make-Up Valve	5093 Hydraulic Filter By-Pass Valve	5097 Hydraulic Flow Divider Valve
509T Hydraulic Oil Temperature Sensor	<del>                                     </del>	
		1
	Lift, Tilt, Tip Controls	
5101 Angling Cylinder	5102 Lift or Hoist Cylinder	5104 Tilt Cylinder
5105 Swing Cylinder	5106 Tip Cylinder	5107 Tailgate Cylinder
5108 Side Dump Cylinder	5109 Lift Kickout Control	5110 Quick Drop Valve
5111 Crossover Valve	5112 Bucket Positioner Control	5115 Bulldozer Control Valve
5117 Pressure Control / Relief Valve	5118 Vent Valve	5119 Float Selector Valve
5120 Pump Selector Valve	5122 Bucket Control Valve	5123 Tilt Control Valve
5124 Loader Control Valve	5125 Tilt Pilot Valve	5126 Lift Pilot Valve
5127 Cylinder Check Valve	5128 Over-Center Valve	5129 Restrictor Valve
5130 Lock Valve	5132 Hydraulic Position Sensor	5133 Coupler Cylinder – Note: Quick Coupler (6129) not included. Note: Coupler Cylinder must be factory consist and/or first mount to receive coverage.
5134 Kickout Valve	5136 Lift or Hoist Control Valve	5137 Flow Control Valve
5138 Door Cylinder	5140 Angle Control Valve	5141 Hitch Lift Cylinder
5142 Draft Control	5143 Drift Reduction Valve	5144 Frame Level Valve
5145 Top Clamp Cylinder	5146 Dump Cylinder	5147 Lowering Control Valve
5148 Multipurpose Bucket Control Valve		
	Cat Skidder Only - Controls	
5164 Winch Hydraulic Pump	5179 Winch Hoses/Lines	
N	lotor Grader Only - Implement Cont	trols
5201 Power Control Box	5206 Circle Drive Motor	5211 Wheel Lean Cylinder
5213 Scarifier Cylinder	5214 Scarifier Valve	5216 Automatic Blade Control
5220 Centershift Lock Control Valve	5223 Centershift Cylinder	5226 Leaning Wheel Control Valve
5227 Blade Sideshift Control	5229 Blade Sideshift Cylinder	5235 Lock Check Valve
5236 Power Control Pump	5261 Servo Valve	5264 Hydraulic Manifold
5265 Articulation Cylinder	5266 Articulation Valve	
	Scraper Only - Controls	
5301 Apron Lift Cylinder	5302 Apron Sequence Valve	5303 Bowl Lift Cylinder
5304 Scraper Control Valve	5305 Ejector Cylinder	5306 Ejector Sequence Valve
5307 Push-Pull Bail Cylinder	5308 Bail-Pull Control Valve	5309 Floor Dump Cylinder
5310 Traction Control Cylinder	5311 Traction Control Valve	5312 Leveling Valve
5313 Cushion Hitch Control Valve	5314 Elevator Motor	5315 Elevator Hydraulic Pump
5316 Cushion Hitch Pump	5317 Cushion Hitch Load Cylinder	5318 Elevator Delay Valve
5319 Cushion Hitch Selector Valve	5320 Elevator Chain Adjustment Cylinder	5321 Carry Check Valve

	er, Tool Bar & Other Implement Co	
5351 Ripper Control Valve	5352 Ripper Lift Cylinder	5353 Ripper Pin Puller Control Valve
5354 Ripper Pin Puller Cylinder	5355 Tool Bar Cylinde	5356 Ripper Tilt Cylinder
5357 Ripper Contro		1
F		
	ackhoe, Front Shovel & Other Imple	
5451 Shovel Boom Cylinder	5452 Shovel Stick Cylinder	5453 Check & Relief Valve
5454 Swing Relief Valve	5455 Pump Signal Pressure Control Valve	5456 Boom Cylinder
5457 Bucket Cylinde	5458 Stick Cylinder	5459 Swing Drive
5461 Boom Control Valve	5462 Speed & Direction Pilot Control Valve	5463 Offset Cylinder
5464 Stick Control Valve	5465 Stick & Swing Pilot Control Valve	5466 Boom & Attachment Pilot Contro Valve
5467 Pressure Reducing / Summing Valve	5468 Stabilizer Cylinder	5469 Underspeed Valve
5470 Bucket Master Cylinder	5471 Combiner & Relief Valve	5472 Load Check Valve
5473 Swing Pump	5474 Extendable Stick Control Valve	5475 Bottom Dump Bucket Control Valve
5476 Backhoe Control Valve	5477 Swing Actuator	5478 Bucket Bowl Cylinder (excluded for the 6000 series Hydraulic Mining Shovels)
5479 Solenoid Valve	5480 Swing Control Valve	5481 Stabilizer Control Valve
5482 Heel Cylinder	5483 Swing Brake Valve	5484 Sideshift Lock
5486 Telescoping Cylinder	5487 Slow Return Valve	5488 Hydraulic Hammer Control
5489 Increased Pressure Control		5491 Quick Coupler Valve
5492 Clam Control Valve	5493 Shovel Bucket Cylinder	5494 Rotator Motor
5495 Rotator Cylinder	5496 Control Pattern Change Valve	5497 Fore Boom Cylinder
5498 Multipurpose Bucket Cylinder		
	Logger & Skidder Only Controls	
5551 Speed Reducer Valve	5553 Shear Cylinder	5554 Delimb Cylinder
5555 Grapple Cylinder	5557 Arch Cylinder	5558 Saw Cylinder
5560 Logger Head Control Valve	5561 Logger Head Check Valve	5562 Delimb Cylinder Selector Valve
5563 Shear Speed Change Valve	5564 Grapple Cylinder Check Valve	5565 Grapple/Delimb Arm Pilot Valve
5567 Logger Head Positioner Master Cylinder	5568 Grapple Control Valve	5570 Grapple Hydraulic Control
5571 Solenoid & Relief Valve	5572 Feed Roller Arm Cylinder	5573 Holding Arm Cylinder
5574 Measuring Sensor	5575 Saw Motor	5576 Gate Cylinder
	Implement Electronic Controls	
5701 ECM (of the Implement Electronic	5702 Implement Hydraulic Electronic	5705 Joystick (of the Implement
Controls system only)	Control	Electronic Control system only)
5721 Potentiometer	5736 Linkage Position Sensor	5737 Control Lever Position Sensor

5740 Implement Software & Hydraulic		
Software		
	Material Handler Only Controls	5
5802 Full Free Lift Cylinder	5803 Full Free Triple Lift Cylinder	5809 Sideshift Valve
5811 Load Control Valve	5812 Full Free Triple Lift Primary Cylinder	5813 Full Free Triple Lift Second Cylinder
5814 Full Free Quadruple Lift Cylinder	5815 Slew Cylinder	5822 Twist Lock Cylinder
	Other Controls	
5804 Side Shift Cylinder	5807 Fork Positioner Cylinder	5816 Compensating Cylinder
5823 Fork Leveling Cylinder	5904 Auger Drive	
Ot	her Implements & Machine Compo	onents
	7078 Frame Level Cylinder	7080 Oscillation Lock Cylinder
6000 Seri	es Hydraulic Mining Shovel Only	Components
4265 Service Brake Control Valve	508A Auxiliary Pilot Pump	508C Hydraulic Cooling Pump
79C3 Propel Brake	79PA Swing Drive Motor	
	Rail/Road Wheeled Excavator O	nly
1130 Valve Actuator	7562 Hydraulic Cylinders	5116 Attachment Cylinder
5149 Bogie Lift Cylinder	5362 Work Tool Cylinder	

#### **Additional Coverage Clarifications:**

- Electronic controls and sensors which function to direct power for the purpose of moving the machine are included. This includes power shift controls, engine pressure controls, differential lock, finger-tip controls, wiring connectors that are part of the designated Powertrain components
- Hydraulic valves & controls includes specified valve parts for directing or controlling hydraulic fluid for steering and implements, including automatic blade controls and bucket position controls

#### Claiming Example for Hydraulic Couplers and Hydraulic Coupler Cylinders

Note: Two separate claims are required.

#### Claim #1

- Submit a standard warranty claim for parts only
- Serial number: Hydraulic coupler serial number

NOTE: All other claiming fields are to be populated per standard process

#### Claim #2

- Submit a claim for Labor Only
- Serial Number: Machine Serial Number
- Description Code: Enter 38.
- Claim Story: Claim story should reference associated parts claim number and should include dealer code from the associated standard warranty claim for parts only.
- NOTE: All other claiming fields are to be populated per standard process



#### **SERVICE**

# **Equipment Protection Plan**

Global

**Machines** 

### **Powertrain Equipment Protection Plan (EPP)**

#### Overview

This coverage bulletin defines the Powertrain Components that are covered under various new, used and rebuild equipment programs offered through Caterpillar.

Powertrain components produce, transmit, or control engine horsepower for the purpose of propelling (moving) the equipment.

Paving products have two unique exceptions involving vibratory and rotary drive components defined.

Refer to the standard machine warranty and applicable program bulletins for covered component failures during the standard warranty period and refer to this Powertrain EPP for covered component failures during the EPP coverage period.

#### **Components Covered Under Powertrain EPP**

EPP provides dealer reimbursement for parts and/or labor for covered defects in Caterpillar material and manufacturer workmanship. Repairs must be completed by a Cat® authorized dealer.

Coverage for defects in Cat material and manufacturer workmanship as defined by EPP means the failure of any original or Cat approved replacement part to work as designed in normal service, providing proper maintenance was received as recommended in the applicable Caterpillar manuals, including the Operation and Maintenance Manual (OMM) and other applicable service literature. Mechanical breakdown means the failure of any original or replacement part covered by EPP to work as it was designed in normal service, providing it has received customary maintenance as recommended by the manufacturer. Any mechanical breakdown and resultant damage caused by failure of a non-covered component (including Yellowmark<sup>TM</sup> A Caterpillar Brand, and Cat® Classic Brand parts) are not eligible

See the Parts Book Component Codes section below

**►** 08.01-03 (11/19)

➤ Indicates change.

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#### **Components Excluded Under Powertrain EPP**

The following are components commonly mistaken as covered Powertrain Components. The following components are excluded:

- Service Brake Components external brake components that are accessible without disassembly of a Powertrain component are not covered (i.e. brake linkage and control valves). Wear items, including but not limited to, discs, plates, and linings, either internal or external are not included.
- Rotor Drive Mechanism belts, chains and rotor brakes
- Undercarriage Components on track-type and track belt machines including sprockets, drive wheels, track assemblies, track belts, track rollers, mid-wheels, idlers, roller frames tensioning system and non-powered axles
  - Some of these exclusions do not apply to Multi Terrain Loader (MTL), Compact Track Loader (CTL) and Mini Hydraulic Excavators (MHEX) products. For MTL/CTL/MHEX machines, see the list of additional components included in the Service Management Control System (SMCS) codes section.
- MTL/CTL/MHEX track belts and track assemblies
- Radiator
  - The Radiator exclusion does not always apply to MTL/CTL/MHEX products. For MTL/CTL/MHEX machines, see the list of additional components included on the SMCS codes section
- Engine Attachments alternator, engine starter, air compressor and air conditioning compressor
- External Hoses and Lines for oil, water and air
  - For clarification; only hydrostatic/high-pressure lines and hoses itemized in the SMCS code list between the drive pump and motor are included in coverage.

#### General Exclusions and Limitations

Powertrain EPP does not cover the following:

- Operator abuse, neglect, improper or abusive use of the machine including but not limited to the failure to perform the recommended preventative maintenance as specified in the applicable Caterpillar manuals, including the Operation and Maintenance Manual (OMM).
- · Applications not approved by Caterpillar.
- Operation beyond the design and/or capacity of the machine.
- Wear-out and normal deterioration in performance, accelerated wear-out of components due to operating technique or application; including but not limited to oil consumption and gasket or seal leaks.
- Chemical corrosion and physical or mechanical erosion.
- Unauthorized fuel setting changes.
- A mechanical breakdown caused by, or a result of, acts of war, vandalism, riot, theft, explosion, collision, fire and/or any other act of nature, person or vermin.
- Operating equipment with improper, contaminated, or improper levels of fuel or fluids, or the use of improper filters.
- Modifications, unless the modifications were authorized at the request of Caterpillar and performed at an approved repair facility.
- Replacement, adjustments, or alignment or any part not covered by this agreement, including lube oils, grease, coolant, air conditioner refrigerant, alternator, starter, air compressor, air conditioner, compressor, and other bolt-on attachments, unless required in conjunction with the repair of a covered part.
- Normally scheduled preventive maintenance or maintenance services, including, but not limited to, valve lash adjustments and maintenance items including filters, fuel nozzles, fuel injectors, thermostats, and seals and gaskets.
- Operating at performance settings other than the standard Caterpillar specification
- Accelerated wear-out of components due to operating technique or application
- Physical damage to any product resulting from causes other than mechanical breakdown.

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- Any repairs if the service meter has been stopped or altered or misrepresents the equipment's actual usage.
- Mechanical transportation, towing costs or field service travel expenses, unless Travel EPP (Americas North, EAME) is purchased. See bulletin 8.04
- Loss of time, inconvenience, downtime or downtime-related expenses or other incidental or consequential loss that results from a defect in material or workmanship.
- Any costs incurred to improve operating performance due to normal wear and tear.
- Storage or miscellaneous shop supplies.
- Freight
- Taxes.
- Any cost covered by any warranty of the manufacturer including emissions warranty or repairer's guarantee regardless of whether the warranty or repairer's guarantee is honored.
- Performance complaints including, but not limited to, adjustments to fuel settings or electronic unit injectors to comply with emissions standards under Environmental Protection Agency or similar national, federal, provincial or state law.
- Any costs incurred for the manufacturer to comply with emissions standards under the Environmental Protection Agency or similar national, federal, provincial or state law.
- Failure to use fuels and lubricants that meet or exceed the minimum specification requirements of the manufacturer as specified in the operations manual or other technical bulletins.
- Dealer rework or dealer workmanship issues relating to previous repairs
- · Modifications including any reconfiguration of or addition to the equipment
- Failure of and resultant damage caused by: attachments, implements, work tools and modifications, including both serialized or non-serialized Cat products added to the equipment. Examples include but are not limited to: booms, sticks, buckets, screeds, winches, augers, ground engagements, hitches, etc.
   Separate and optional EPP coverage may be available for certain products outside of the scope of this EPP
- Non-serialized Work Tools and other attachments shipped with the equipment are generally excluded from EPP coverage unless specifically identified as covered components within applicable warranty statement.
- Components or Systems covered by other Caterpillar warranty statements and are therefore excluded from EPP. Examples include, but are not limited to:
  - Batteries
  - Cat Work Tools
  - Mobil-trac<sup>™</sup> belts
  - Rubber track used on Compact Construction Equipment (CCE).
  - Machine Control & Guidance
  - Cat Tires
  - Service Tools and Supplies
  - Yellowmark<sup>™</sup>
  - Moving Undercarriage (Refer to Cat Parts Warranty and Undercarriage Assurance bulletins)
  - Ground Engaging Tools (GET) (Refer to bulletin 4.03)
  - Long-Life Weld-On Landfill Compactor Plus Tip (Refer to bulletin 4.03)

- Components covered by any other manufacturer's warranty statements and are therefore excluded from
  Premier Coverage. If an Original Equipment Manufacturer (OEM) other than Caterpillar has a warranty in
  place for the equipment, claims should be filed and settled with that OEM prior to submitting supplemental
  EPP claims. Examples include, but not limited to:
  - Other Manufacturer Tires
  - Other Manufacturer Hammers
  - Timberking™ Products
  - Forestry Work Tools
  - Ag Products
  - Trimble

#### **Emissions Components**

In U.S., Canada, Virgin Islands, Puerto Rico, and South Korea certain parts and/or components may qualify for Manufacturer Emissions Warranty in accordance with the United States Environmental Protection Agency (US EPA) and the California Air Resources Board (ARB). The South Korea Clean Air Conservation Act requires Caterpillar to provide an emission warranty to end users; for engines used in certain construction equipment operated and repaired in South Korea.

Bulletin 7.01 explains the details of Manufacturer Emissions Warranty and the claiming procedures for emissions components.

Unless otherwise specified, upon expiration of the manufacturer emissions warranty, certain parts are included in EPP and covered for defects in Cat material and manufacturer workmanship according to the normal EPP guidelines. See applicable EPP Coverage Bulletins for information regarding emissions components that are beyond the terms of manufacturer emissions warranty and are enrolled in a Caterpillar EPP.

# Claiming Practices for Service Letters PIP/PSP on Machines Covered by the New Machine EPP

- Product Improvement Programs (PIP) and Product Support Programs (PSP), performed on equipment covered by this program must be claimed under the appropriate PIP or PSP
  - Do not claim these repairs under the EPP. Refer to Bulletin 1.16 Service Letters (PIP/PSP) for additional information.
  - EPP only applies to the customer participation portion of the after-failure PSP that exceeds the Service Letter limit.

#### Wear-out and Extent of Coverage

Wear-out and/or deterioration of any component are not covered by Powertrain EPP.

The intent is not to restore the product to a "like new" condition, but rather to restore the product to its operating condition just prior to the covered failure. Powertrain EPP covers only the repair or replacement of the failed component and any resultant damaged parts. Other parts removed in the process of repair will be reinstalled as is, unless the customer authorizes and funds any additional replacement cost.

**Example:** While performing a Powertrain EPP repair for a piston ring failure, the dealer service technician notices the v-belts and coolant hoses are worn and deteriorated. The service technician also notices some wear (within acceptable limits) on the cylinder head valve guides. In addition to the piston ring failure, the service technician replaces the v-belts and coolant hoses and reconditions the valve guides to avoid future downtime.

In this example, the v-belts, coolant hoses and valve guide reconditioning cannot be claimed to Caterpillar because they did not have a defect, nor were they damaged as a result of the piston ring failure. They were repaired or replaced as a result of the customer responsibilities for assuring all recommended preventive maintenance is performed.

**NOTE:** If the piston ring failed due to abuse (such as operating without changing oil at the proper interval), the ring failure and resultant damage would not be due to a Caterpillar defect, and therefore is not a covered failure.

#### **Customer's Responsibilities**

- Operating the product properly and within the limits of intended capacity and application
- Fueling, lubricating, adjusting, operating, and maintaining the equipment as instructed by the dealer and in accordance with the recommendations set forth in the applicable Caterpillar manuals, including the OMM and other applicable service literature
- Notifying the dealer promptly if a problem exists
- Promptly making the product available to the dealer for warranty repairs and product improvement programs
- Assuring all recommended preventative maintenance is performed at the specified service intervals as described in the OMM. Preventative maintenance includes, but is not limited to, the servicing, adjusting and/ or replacing of specified components

Powertrain EPP does not cover failure of any components if customer's responsibilities are not followed. The dealer may be required to provide proof of compliance with the maintenance schedules, at the time of a failure. Proof may include receipts, copies of work orders, or invoices showing the performed maintenance services.

#### Dealer's Responsibilities

- Confirm that the equipment has not experienced a failure prior to the EPP coverage start date. If a failure
  exists, the equipment must be repaired prior to registering it for EPP
- Repair equipment using the most economical method and install only genuine Cat parts
- Keep on file the applicable inspection and all parts and labor invoices relative to required repairs
- Pay for any loss in excess of what is covered by EPP if broader coverage was offered to the customer
- Register equipment for EPP and pay applicable fees

#### **Parts Book Component Codes**

On most pages of all Cat Parts Books (paper or electronic), is printed a four-digit numeric SMCS component code. These component codes are used to describe the area of primary use for the parts and/or components listed on that page.

Following are the SMCS component codes that Caterpillar considers part of Powertrain EPP. Each component code listed on the parts book page should be compared to this list of acceptable Powertrain EPP components.

**NOTE:** Sometimes a Parts Book page with an acceptable Powertrain EPP component code will include parts that are not covered or may include parts that are broken out on another Parts Book page. Additionally, there may be instances of a non-acceptable component code containing parts that may qualify for Powertrain EPP coverage. For clarification regarding coverage, please submit a ticket through the Warranty Service Desk.

#### **Use of Parts Book Component Code on Labor Expense Lines**

Some codes may indicate the use of a substitute code. Substitute codes apply <u>only when using the component code</u> <u>on a labor expense line</u>, if labor reimbursement is applicable.

Example: 1299 Hydraulic Timing Advance (use 1272)

Using a canceled component code on a labor expense line will cause the entire service claim to be canceled.

NOTE: Refer to Bulletins 1.06 and 1.09 for proper group number and labor line SMCS code usage.

On the following page are the SMCS component codes in numeric order that Caterpillar considers part of Powertrain EPP. For qualification, the component code listed on the parts book page should be compared to this list of acceptable hydraulic or technology components.

The SMCS component codes can be used as a guide for helping to determine if a failed part may be considered part of Powertrain EPP coverage.

SMCS CODES - POWERTRAIN CO	I. BASIC ENGINE	
Engine -	Components essential to engine or	peration:
1002 Power Pack	1007 Engine & Flywheel Clutch	1014 Engine & Output Drive Assembly
1017 Engine & Pump Drive	1020 Long Block	1025 Engine, Transmission, Cooling Pkg
	Air Induction & Exhaust System	
105H High-Pressure Turbocharger	105L Low-Pressure Turbocharger	105P Precooler
1050 Air Induction & Exhaust System	1052 Turbocharger Group	1053 Turbocharger Cartridge
1056 Turbocharger Cartridge Housing	1057 Exhaust Bypass Valve	1058 Inlet Manifold
1059 Exhaust Manifold	106A Aftercooler Air Temperature Control (All Regions)	106B Intercooler
1060 Turbocharger Compressor Housing	1062 Muffler	1063 Aftercooler Group
1064 Aftercooler Core	1065 Turbocharger Turbine Housing	1066 Turbocharger Thrust Plate Assembly
1069 Roots Blower	107P Air Pump	1070 Water Cooled Turbocharger
1071 Air line/Pipe (of the Air Inlet and Exhaust System)	1073 Turbocharger Heat Shield	1074 Positive Crankcase Ventilation Valve
1075 Diesel Oxidation Catalyst	1076 Differential Pressure Ratio Regulator	1077 Turbocharger Shaft & Wheel Assembly
1079 Aftercooler Intake Manifold	108B Combustion Body	108D Clean Emissions Module
1080 Exhaust Gas Recirculation System	1081 Boost Control Valve	1082 Exhaust Gas Recirculation Actuator
1084 Exhaust Gas Recirculation Switch	1085 Hydra-Mechanical Shutoff Control	1086 Hydra-Mechanical Shutoff Drive
1087 Air Inlet	1088 Exhaust Gas Valve	1092 Flame Arrestor
1094 Plenum	1096 Oxygen Sensor	
Cylinder Head Asse	mbly - of the 1100 Assembly, EPP co	<del></del>
	1101 Cylinder Head Casting	1102 Rocker Shaft Assembly
1103 Valve Seat/Insert	1104 Valve Guide	1105 Inlet/Exhaust Valve
1106 Pre-chamber/Nozzle Adapter	1107 Valve Cover	1108 Valve Spring
1109 Valve Rotator	1110 & 1111 Camshaft	
1112 Camshaft Bearing	1113 Camshaft Housing Assembly	1114 Spark Plug Adaptor
1115 Water Director	1117 Threaded Insert	1118 Compression Release
	1120 Valve Cover Base	1121 Valve Bridge
1123 Rocker Arm	1124 Cylinder Head Gasket	1125 Injector Sleeve
1126 Cylinder Head Manifold	1129 Engine Brake (of the Engine Brake Group)	
	Front and Rear Covers	
1150 Front & Rear Covers	1151 (Use 1162 or 1166) Cover/ Housing	1155 Brakesaver Group
1156 Flywheel	1157 Flywheel Housing	1158 Flywheel Ring Gear
1159 Brakesaver Control Valve	1160 Crankshaft Front Seal	1161 Crankshaft Rear Seal
1162 Timing Gear Housing	1163 Timing Gear Housing Plate	1164 Engine Output Transfer Gear

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1165 Engine Power Takeoff Drive	1166 Timing Gear Housing Cover	1167 Flywheel Housing Scavenge Pump
Short Block -	of the 1200 Assembly, EPP covers	the following:
	1201 Cylinder Block	1202 Crankshaft
1203 Crankshaft Main Bearing	1204 Crankshaft Gear	1205 Crankshaft Damper/Pulley
1206 Timing/Accessory Gears	1207 Accessory Drive	1208 Push Rod
1209 Camshaft Roller/Follower/Lifter	1210 Camshaft	1211 Camshaft Bearing
1212 Camshaft Gear	1213 & 1214 Piston & Liner	
1215 Piston Rings	1216 Cylinder Liner	1217 Liner Seat/Insert
1218 Connecting Rod	1219 Connecting Rod Bearing	1220 Balancer
1221 Spacer Plate	1222 Cylinder Block Sleeve	1223 Cylinder Block Cylinder
1224 Cylinder Block Main Bearing Bores	1225 Piston & Connecting Rod	1230 Crankshaft Main & Rod Bearings
1231 Crankshaft Counterweight	1232 Crankshaft Thrust Plate	1233 Crankcase Explosion Relief Valve
1234 Idler Gear	1237 Engine Stub Shaft	1239 Cylinder Pack
1240 Block Underframe	1241 Timing Chain/Belt	1242 Pump Drive
	-	
Fuel System	- of the 1250 system, EPP covers tl	he following:
125H High Pressure Fuel Pump		1251 Fuel Injection Pump
1252 Fuel Injection Lines	1253 Fuel Injection Pump Housing	1254 Fuel Injection Valve/Nozzle
1255 Fuel Transfer Pump Housing	1256 Fuel Transfer Pump	1257 Rack/Control Shaft
1259 Fuel Shutoff Solenoid	1264 Governor	1268 Speed Limiter
1269 Throttle	1299 (Use1272) Timing Advance	1275 Air Control Valve
1276 Decelerator / Accelerator	1278 Air/Fuel Ratio Control	1281 Fuel Injection Pump-Lifters
1282 LPG Fuelock Valve	1286 Injection Pump & Governor Group	1287 Governor Housing
1288 Fuel Pump/Governor Drive	1289 Hydraulic/Hydra-Mechanical Governor	1290 Unit Injector
1292 Fuel Camshaft	1295 Auxiliary Fuel Transfer Pump	1298 Unit Injector Control Linkage
1272 Hydraulic Timing Advance	1703 Injector Control Shaft Lever	1704 Fuel Shutoff
1705 Variable Hp Control Valve/ Solenoid	1711 Fuel Injection Line Adaptor	1712 Fuel Cooler
1713 Unit Injector Sleeve	1714 Unit Injector Hydraulic Pump	1715 Fuel Pressure Regulator Valve
1716 Governor Actuator	1718 Fuel Pressor Sensor	1719 Nozzle Cleaning Manifold
1723 Combustion Fuel Enable Solenoid	1741 Gas Air Fuel Ration Control Valve	1743 Spray Nozzle
	Lubrication System	
130M Oil Metering Valve	1302 Engine Oil Pan Group	1304 Engine Oil Pump
1306 Engine Oil Filter Housing/Base	1309 Turbocharger Lube Valve	1312 Oil Scavenge Pump
1313 Oil Pump Drive	1314 Oil Cooler Bypass Valve	1315 Oil Pressure Relief Valve
1319 Pre-lube Pump	1320 Turbocharger Oil Accumulator	1324 Engine Oil Sump Pump
1325 High-Speed Oil Change Group	1327 Engine Priority Valve	1329 Shutoff Valve
1330 Oil Temperature Regulator	1331 Piston Cooling Tube	1332 Oil Sequence Valve
1334 Engine Oil Level Regulator	1336 Oil Mist Detector	<del>                                     </del>

	Cooling System	
135D Coolant Diverter Valve	135V Thermostatic Valve	1355 Thermostat/Regulator
1357 V-Belt Pulley Assembly (Excluding maintenance items or wear out related failure. Does not include serpentine V Belt)	1356 Fan & Fan Drive	1358 Fan Belt Tightener
1359 Fan Drive Assembly	1361 Jacket Water Pump, Drive Group	1362 Water Manifold
1363 Aftercooler Water Pump	1364 Water Pump Impeller	1365 Brake Oil Cooler
1366 Brake/Torque Converter Cooler	1368 Retarder Cooler	1370 Cooling System System Relief Valve
1371 Auxiliary Raw Water Pump	1373 Water Pump Housing	1374 Hydraulic Oil Cooler
1375 Powertrain Oil Cooler (replaced 3019)	1375 Torque Converter/Transmission Cooler	1376 Torque Converter Trans. & Hydraulic Cooler
1378 Engine Oil Cooler	1379 Heat Exchanger	1384 Water Pump Pulley
1385 Raw Water Pump Drive	1386 Hydraulic Fan Motor	1387 Hydraulic Fan Pump
1389 Water Pump Shaft	138R Fan Reversing Valve	1390 Auxiliary Fan Drive
	Electric System	
1404 Generator	1406 Charging System (Note: Does not include Alternator or Alternator Group)	1411 Disconnect Switch
1412 Glow Plug	1416 Start Switch	1419 Series Parallel Switch
1424 Neutral Start Switch	1439 Sensor (of the Electrical and Starting System Group) Excluding Filter Group	
	Starting System	
1469 Prelube Starter	Starting System	
1469 Prelube Starter	Starting System  Ignition System	
1469 Prelube Starter 1563 Combustion Sensor		
1563 Combustion Sensor	Ignition System	
1563 Combustion Sensor	Ignition System  Electronic Drive & Control	
1563 Combustion Sensor  1611 Directional Switch Assembly	Ignition System  Electronic Drive & Control	y, EPP covers the following:
1563 Combustion Sensor  1611 Directional Switch Assembly	Ignition System  Electronic Drive & Control  1613 Drive Axle Control Unit	y, EPP covers the following: 1902 Ratings Personality Module
1563 Combustion Sensor  1611 Directional Switch Assembly  Engine Electronic Control (E	Ignition System  Electronic Drive & Control  1613 Drive Axle Control Unit  CM) System – of the 1900 Assemble	
1563 Combustion Sensor  1611 Directional Switch Assembly  Engine Electronic Control (E	Ignition System  Electronic Drive & Control  1613 Drive Axle Control Unit  ECM) System – of the 1900 Assemble  1901 Electronic Control Module (ECM)	1902 Ratings Personality Module
1563 Combustion Sensor  1611 Directional Switch Assembly  Engine Electronic Control (E)  1904 Transducer Module  1907 Engine Speed Sensor	Ignition System  Electronic Drive & Control  1613 Drive Axle Control Unit  ECM) System – of the 1900 Assemble  1901 Electronic Control Module (ECM)  1905 Timing Position Sensor	1902 Ratings Personality Module 1906 Water Temperature Sensor
1563 Combustion Sensor  1611 Directional Switch Assembly  Engine Electronic Control (E)  1904 Transducer Module  1907 Engine Speed Sensor  1910 Timing Solenoid	Ignition System  Electronic Drive & Control  1613 Drive Axle Control Unit  ECM) System – of the 1900 Assemble 1901 Electronic Control Module (ECM) 1905 Timing Position Sensor 1908 Electronic Governor	1902 Ratings Personality Module 1906 Water Temperature Sensor 1909 Rack Solenoid
1563 Combustion Sensor  1611 Directional Switch Assembly  Engine Electronic Control (E)  1904 Transducer Module  1907 Engine Speed Sensor  1910 Timing Solenoid  1913 Throttle Speed Sensor	Ignition System  Electronic Drive & Control  1613 Drive Axle Control Unit  ECM) System – of the 1900 Assemble  1901 Electronic Control Module (ECM)  1905 Timing Position Sensor  1908 Electronic Governor  1911 Rack Position Sensor	1902 Ratings Personality Module 1906 Water Temperature Sensor 1909 Rack Solenoid 1912 Engine Speed/Timing Sensor
1563 Combustion Sensor  1611 Directional Switch Assembly  Engine Electronic Control (E)  1904 Transducer Module  1907 Engine Speed Sensor  1910 Timing Solenoid  1913 Throttle Speed Sensor  1916 Crankcase Pressure Sensor	Ignition System  Electronic Drive & Control  1613 Drive Axle Control Unit  ECM) System – of the 1900 Assemble 1901 Electronic Control Module (ECM) 1905 Timing Position Sensor 1908 Electronic Governor 1911 Rack Position Sensor 1914 Machine Speed Buffer	1902 Ratings Personality Module 1906 Water Temperature Sensor 1909 Rack Solenoid 1912 Engine Speed/Timing Sensor 1915 Engine Speed Control
1563 Combustion Sensor  1611 Directional Switch Assembly  Engine Electronic Control (E)  1904 Transducer Module  1907 Engine Speed Sensor  1910 Timing Solenoid  1913 Throttle Speed Sensor  1916 Crankcase Pressure Sensor  1919 Exhaust Temperature Sensor	Ignition System  Electronic Drive & Control  1613 Drive Axle Control Unit  ECM) System – of the 1900 Assemble  1901 Electronic Control Module (ECM)  1905 Timing Position Sensor  1908 Electronic Governor  1911 Rack Position Sensor  1914 Machine Speed Buffer  1917 Boost Pressure Sensor	1902 Ratings Personality Module 1906 Water Temperature Sensor 1909 Rack Solenoid 1912 Engine Speed/Timing Sensor 1915 Engine Speed Control 1918 Throttle Lock Control
1563 Combustion Sensor  1611 Directional Switch Assembly	Ignition System  Electronic Drive & Control  1613 Drive Axle Control Unit  ECM) System – of the 1900 Assembly 1901 Electronic Control Module (ECM) 1905 Timing Position Sensor 1908 Electronic Governor 1911 Rack Position Sensor 1914 Machine Speed Buffer 1917 Boost Pressure Sensor 1920 Engine Software Flashing	1902 Ratings Personality Module 1906 Water Temperature Sensor 1909 Rack Solenoid 1912 Engine Speed/Timing Sensor 1915 Engine Speed Control 1918 Throttle Lock Control 1921 Inlet Air Temperature Sensor

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1931 Engine & Hydraulic Pump Electronic Control Module	1940 Modulating Valve	1948 Dual Fuel Electronic Control Unit
		I
	II. TRANSMISSION OF POWER	
Transmission & Driv	e Line - of the 3000 Assembly, EPP	cover the following:
3001, 3002, 3003 Transmission,	3005 Drive Train / Transmission Oil	3011 Bevel and Transfer Case
Torque Converter, & Transfer Gears	Filler	
3013 Axle Arrangement	3015 Transmission & Axle	3016 Drive Train Oil Lines
3017 (Use 3066) Drive Train Oil Pump	301T Drive Train Oil Temperature Sensor	3020 Drive & Steering Axle
3024 Drive Train Breather	3030 Transmission	3031 & 3032 Transmission, Transfer Gears, Retarder
Clutch	& Manual Shift/Direct Drive Transn	nission
	3051 (Use 3052) Flywheel Clutch	3053 Clutch Shaft
3054 Clutch Plate	3055 Power Takeoff Clutch	3056 Clutch Oil Pump
3057 Clutch Booster	3058 Clutch Brake	3059 Clutch Control
	3061 Transmission Gears	3062 Transmission Reverse Box
3063 Transmission Shaft	3064 Transmission Case	3065 Transmission Control
3066 Transmission Oil Pump	3068 Transmission Oil Filter Base	3069 Shift Console
3071 Flywheel Clutch Hydraulic Control	3072 Range Transmission / Selector	3073 Transmission Hydraulic Control Valve
3074 Transmission Pressure Control Valve	3075 Transmission Output Gears	3076 Throwout Bearing
3077 Transmission Brake	3078 Transmission Speed Control Valve	3079 Shuttle Control
3082 Transmission Mount	3083 Transmission Selector & Pressure Control Valve	
Torque Converter, Divide	r, Retarder - of the 3100 Assembly,	EPP cover the following:
	3101 Torque Converter	3102 Torque Converter Clutch
3103 Torque Converter Lines / Hoses	3104 Torque Converter / Transmission Wiring Harness	3105 Torque Converter Housing
3106 Torque Converter, Transfer Gear, Retarder	3107 Power Takeoff Drive	3108 Pump Drive
3109 Torque Converter & Retarder	3110 <b>(Use 3030)</b> Torque Divider Transmission	3111 <b>(Use 3073)</b> Torque Divider Control Valve
3112 <b>(Use 3151)</b> Torque Divider Governor	3113 Torque Divider	3114 Torque Divider Planetary Carrier
3115 Torque Converter Scavenge Pump	3116 (Use 3031) Transfer Gears, Torque Divider, & Retarder	3117 Transfer Gears and Retarder
3118 <b>(Use 3032)</b> Torque Divider & Retarder	3120 Retarder	3121 Retarder Extended Braking Control
3122 Retarder Lines	3123 Retarder Control Valve	3124 Lockup Clutch Pressure Control Valve
3125 Torque Converter & Divider	3126 Retarder Selector Valve	3127 Torque Converter Bearing Retainer

Shaft   Shaf			
3134 Torque Converter Impeller 3137 Torque Converter Pressure/ Release Pump 3140 Torque Converter Pressure/ Release Pump 3140 Torque Converter Pressure/ Release Pump 3140 Torque Converter Control 3141 Torque Converter Speed Sensor 3142 Automatic Retarder Control 3143 Torque Converter Electronic Control 3143 Torque Converter Electronic Control 3143 Torque Converter Electronic Control 3145 Torque Converter Electronic Control 3150 Power Shift Transmission 3151 Transmission Guernor 3153 (Use 3066) Transmission Oil Pump 3154 Transmission Lines / Hoses 3155 Transmission Clutches 3156 Transmission Control Linkage 3157 Transmission Manual Selector Valve 3160 Transmission Planetary 3162 Creeper Control 3164 (Use 3068) Oil Filter Base 3166 Rotary Actuator 3169 Transmission Electronic Control (Includes Fingertip Controls) 3171 Transmission Manual Switch 3172 Transmission Shift Solenoid 3173 Transmission Planetary 3180 Transmission Nanual Switch 3174 Transmission Planetary 3180 Transmission Nanual Switch 3175 Transmission Nanual Switch 3176 Transmission Planetary 3180 Transmission Planetary 3181 Transmission Nanual Switch 3177 Transmission Planetary 3180 Transmission Planetary 3181 Transmission Nanual Switch 3183 Transmission Nanual Switch 3184 Transmission Nanual Switch 3185 Transmission Planetary 3180 Transmission Planetary 3180 Transmission Planet Carrier 3180 Transmission Control Lock 3184 Transmission Neutralizer Control 3185 Transmission Planet Carrier 3180 Transmission Control Lock 3184 Transmission Neutralizer 3180 Transmission Control Lock 3184 Transmission Neutralizer 3180 Transmission Dump Valve 3180 Transmission Clutch Plate 3181 Transmission Neutralizer 3182 Transmission Dump Valve 3183 Transmission Clutch Plate 3180 Transmission Clutch Plate 3181 Transmission Neutralizer 3182 Transmission Dump Valve 3184 Transmission Underspeed/ 3205 Servo Control Valve 3208 (Use 3064) Transmission Temperature Sensor  Hydrostatic Transmission Output Shaft 3211 (Use 3063) Hydrostatic Transmission Indept Shaft 3214 Synchronizin	3128 Torque Converter Flange	3129 Torque Converter Stator	3130 Torque Divider/Torque Converter Shaft
3137 Torque Converter Pressure/ Sequence Control Valve Release Pump 3140 Torque Converter Control 3141 Torque Converter Speed Sensor 3142 Automatic Retarder Control 3143 Torque Converter Electronic Control 3143 Torque Converter Electronic Control 3145 Torque Converter Electronic Control 3145 Torque Converter Electronic Control 3156 Power Shift Transmission 3151 Transmission Governor 3155 Power Shift Transmission 3155 Transmission Governor 3156 Transmission Lines / Hoses 3157 Transmission Manual Selector Valve 3158 Transmission Auto Selector Valve 3158 Transmission Planetary 3162 Creeper Control 3163 Hydraulic Shift Cylinder 3164 (Yue 3068) Oli Filter Base 3166 Rotary Actuator 3167 Transmission Electronic Control (Includes Fingertip Control) 3171 Transmission Banual Switch 3172 Transmission Slave Switch 3173 Transmission Clutch Piston 3174 Transmission Shift Solenoid 3175 Transmission Neutralizer Control 3180 Transmission Priority Valve 3181 Transmission Neutralizer Control Valve 3183 Transmission Control Lock 3184 Transmission Oil Cooler Bypass Valve 3185 Transmission Planet Carrier 3186 Transmission Planet Carrier 3187 Transmission Clutch Plate 3188 (Use 3064) Transmission Caes 3189 (Use 3063) Transmission Dump Valve 3189 Driva Transmission Clutch Plate 3189 Transmission Control Lock 3184 Transmission Neutralizer 3185 Transmission Dump Valve 3185 Transmission Planet Carrier 3187 Transmission Planet Carrier 3188 (Use 3064) Transmission Caes 3189 (Use 3063) Transmission Dump Valve 3190 Transmission Clutch Plate 3190 Transmission Clutch Plate 3190 Transmission Planet Carrier 3186 (Use 3064) Transmission Caes 3187 Transmission Planet Carrier 3188 (Use 3064) Transmission Caes 3189 (Use 3063) Transmission Dump Valve 3206 Clues 3073) Hydrostatic Control 3206 Hydraulic Flow Control 3206 Hydraulic Flow Control 3207 Servo Control Valve 3208 Glues 3073) Hydrostatic Control 3208 Hydrostatic Flow Control 3209 Hydrostatic Control Linkage 3210 High Pressure Relief Valve 3211 (Use 3063) Hydrostatic Transmission Underspeed/ Ov	3131 Torque Converter Turbine Wheel	3132 High-Low Clutch Group	3133 Torque Converter Relief Valve
Sequence Control Valve   Release Pump   3140 Torque Converter Control   3141 Torque Converter Speed Sensor   3142 Automatic Retarder Control   3143 Torque Converter Electronic Control   3143 Torque Converter Electronic Control   3142 Transmission   3144 Transmission   3150 Power Shift Transmission   3151 Transmission Governor   3153 (Use 3066) Transmission Oil Pump   3154 Transmission Lines / Hoses   3155 Transmission Cutches   3156 Transmission Control Linkage   3157 Transmission Manual Selector Valve   3158 Transmission Auto Selector Valve   3159 Transfer Gear Group   3164 (Use 3068) Oil Fitter Base   3166 Rotary Actuator   3163 Hydraulic Shift Cylinder   3164 (Use 3068) Oil Fitter Base   3166 Rotary Actuator   3167 Transmission Hydraulic Control (Includes Fingertip Controls)   3172 Transmission Slave Switch   3173 Transmission Synchronous Switch   3174 Transmission Manual Switch   3172 Transmission Slave Switch   3174 Transmission Synchronous Switch   3174 Transmission Priority Valve   3181 Transmission Speed Sensor   3176 Transmission Electronic Control (Valve Valve Valve Valve   3184 Transmission Oil Cooler Bypass Valve Valve   3184 Transmission Oil Cooler Bypass Valve Valve   3186 Transmission Planet Carrier Valve Valve   3187 Transmission Planet Carrier Valve Valve   3188 (Use 3064) Transmission Case   3189 (Use 3063) Transmission Dump Valve   3190 Transmission Cultch Plate   3191 Transmission Neutralizer   3192 Transmission Dump Valve   3193 Drive Train High Speed Oil   3194 Transmission Temperature   3192 Transmission Dump Valve   3204 Charge Pump   320	3134 Torque Converter Impeller	3135 Torque Converter Carrier	3136 Torque Converter Hub
Sample   S		1	3139 Modulating Valve
Control   Powershift Transmission   3150 Power Shift Transmission   3151 Transmission Governor   3153 (Use 3066) Transmission Oil Pump   3154 Transmission Lines / Hoses   3155 Transmission Clutches   3156 Transmission Control Linkage   3159 Transmission Manual Selector   3158 Transmission Auto Selector Valve   3159 Transmission Planetary   3162 Creeper Control   3163 Hydraulic Shift Cylinder   3164 (Use 3068) Oil Filter Base   3166 Rotary Actuator   3163 Hydraulic Shift Cylinder   3168 Transmission Electronic Control (Includes Fingertip Controls)   3169 Transmission Clutch Housing (Includes Fingertip Controls)   3172 Transmission Slave Switch   3173 Transmission Synchronous Switch   3174 Transmission Shift Solenoid   3175 Transmission Speed Sensor   3176 Transmission & Transfer Gears   3180 Transmission Priority Valve   3181 Transmission Neutralizer Control   3182 Transmission Lubrication Relief Valve   3183 Transmission Planet Carrier   3184 (Use 3064) Transmission Case   3186 Transmission Planet Carrier   3188 (Use 3064) Transmission Case   3189 (Use 3063) Transmission Shaft Transmission Clutch Plate   3191 Transmission Neutralizer   3192 Transmission Dump Valve   3193 Transmission Case   3194 Transmission Temperature   3192 Transmission Dump Valve   3194 Transmission Temperature   3192 Transmission Dump Valve   3194 Transmission Temperature   3192 Transmission Dump Valve   3202 Hydrostatic Transmission - on hydraulic excavators and equipment with hydrostatic drive or differentic steering, including hydrostatic lines between the pump and motor   3202 Hydrostatic Control Valve   3203 Drive Pump   3204 Charge Pump   3204 Charge Pump   3204 Charge Pump   3204 Charge and Main Relief Valve   3211 (Use 3063) Hydrostatic Control Linkage   3210 High Pressure Relief Valve   3211 (Use 3063) Hydrostatic Control Linkage   3213 Charge and Main Relief Valve   3214 Synchronizing Valve   3222 Hydrostatic Pilot Overspeed Valve   3220 Hydrostatic Transmission Underspeed/ Override Valve   3221 Hydrostatic Pilot Overspeed Valv	3140 Torque Converter Control	3141 Torque Converter Speed Sensor	3142 Automatic Retarder Control
3150 Power Shift Transmission 3151 Transmission Governor 2153 (Use 3066) Transmission Oil Pump 3154 Transmission Lines / Hoses 3155 Transmission Clutches 3156 Transmission Control Linkage 3157 Transmission Manual Selector 3158 Transmission Auto Selector Valve 3159 Transfer Gear Group 3160 Transmission Planetary 3162 Creeper Control 3163 Hydraulic Shift Cylinder 3164 (Use 3068) Oil Filter Base 3166 Rotary Actuator 3167 Transmission Hydraulic Control (Includes Fingertip Controls) 3169 Transmission Clutch Housing 3170 Transmission Clutch Piston (Includes Fingertip Controls) 3172 Transmission Slave Switch 3173 Transmission Synchronous Switch 3174 Transmission Shift Solenoid 3175 Transmission Speed Sensor 3176 Transmission & Transfer Gears 3180 Transmission Priority Valve 3181 Transmission Neutralizer Control Valve Valve 3183 Transmission Control Lock 3184 Transmission Neutralizer Control Valve 3186 Transmission Planet Carrier Thrust Disc/Plate 3191 Transmission Neutralizer 3198 (Use 3063) Transmission Planet Carrier Sensor 3189 (Use 3063) Transmission Dump Valve 3193 Drive Train High Speed Oil 3194 Transmission Temperature Sensor 3192 Transmission Dump Valve 3202 Hydraulic Flow Control 3203 Drive Pump 3204 Charge Pump 3205 Servo Control Valve 3208 (Use 3073) Hydrostatic Control 3203 Drive Pump 3204 Charge Pump 3205 Servo Control Valve 3208 Manifold/Metering Valve 3211 (Use 3063) Transmission Underspeed/ Overspeed Valve 3218 Hydrostatic Lines & Hoses 3219 Hydrostatic Pliot Overspeed Valve 3216 Transmission Underspeed/ Overspeed Valve 3221 Hydrostatic Power Case 3222 Hydrostatic Pump Head 3222 Transmission Underspeed/ Override Valve			
3150 Power Shift Transmission 3151 Transmission Governor 2153 (Use 3066) Transmission Oil Pump 3154 Transmission Lines / Hoses 3155 Transmission Clutches 3156 Transmission Control Linkage 3157 Transmission Manual Selector 3158 Transmission Auto Selector Valve 3159 Transfer Gear Group 3160 Transmission Planetary 3162 Creeper Control 3163 Hydraulic Shift Cylinder 3164 (Use 3068) Oil Filter Base 3166 Rotary Actuator 3167 Transmission Hydraulic Control (Includes Fingertip Controls) 3169 Transmission Clutch Housing 3170 Transmission Clutch Piston (Includes Fingertip Controls) 3172 Transmission Slave Switch 3173 Transmission Synchronous Switch 3174 Transmission Shift Solenoid 3175 Transmission Speed Sensor 3176 Transmission & Transfer Gears 3180 Transmission Priority Valve 3181 Transmission Neutralizer Control Valve Valve 3183 Transmission Control Lock 3184 Transmission Neutralizer Control Valve 3186 Transmission Planet Carrier Thrust Disc/Plate 3191 Transmission Neutralizer 3198 (Use 3063) Transmission Planet Carrier Sensor 3189 (Use 3063) Transmission Dump Valve 3193 Drive Train High Speed Oil 3194 Transmission Temperature Sensor 3192 Transmission Dump Valve 3202 Hydraulic Flow Control 3203 Drive Pump 3204 Charge Pump 3205 Servo Control Valve 3208 (Use 3073) Hydrostatic Control 3203 Drive Pump 3204 Charge Pump 3205 Servo Control Valve 3208 Manifold/Metering Valve 3211 (Use 3063) Transmission Underspeed/ Overspeed Valve 3218 Hydrostatic Lines & Hoses 3219 Hydrostatic Pliot Overspeed Valve 3216 Transmission Underspeed/ Overspeed Valve 3221 Hydrostatic Power Case 3222 Hydrostatic Pump Head 3222 Transmission Underspeed/ Override Valve		Powershift Transmission	
Pump   3154 Transmission Lines / Hoses   3155 Transmission Clutches   3156 Transmission Control Linkage   3157 Transmission Manual Selector   3158 Transmission Auto Selector Valve   3159 Transfer Gear Group   3160 Transmission Planetary   3162 Creeper Control   3163 Hydraulic Shift Cylinder   3164 Transmission Planetary   3166 Transmission Planetary   3168 Transmission Electronic Control   3167 Transmission Hydraulic Control   3168 Transmission Electronic Control   3169 Transmission Clutch Housing   3170 Transmission Clutch Piston   3171 Transmission Manual Switch   3172 Transmission Slave Switch   3173 Transmission Synchronous Switch   3176 Transmission Synchronous Switch   3176 Transmission Synchronous Switch   3176 Transmission Synchronous Switch   3176 Transmission & Transfer Gears   3180 Transmission Priority Valve   3181 Transmission Neutralizer Control Valve   3183 Transmission Planet Carrier Transmission Planet Carrier   3188 (Use 3064) Transmission Case   3189 (Use 3063) Transmission Planet Carrier Valve   3191 Transmission Neutralizer   3192 Transmission Dump Valve   3193 Transmission Clutch Plate   3191 Transmission Temperature   3192 Transmission Dump Valve   3193 Drive Train High Speed Oil   3194 Transmission Temperature   3192 Transmission Dump Valve   3202 Hydraulic Flow Control   3203 Drive Pump   3204 Charge Pump   3204 Charge Pump   3205 Servo Control Valve   3208 (Use 3073) Hydrostatic Control   3209 Hydrostatic Control Linkage   3210 High Pressure Relief Valve   3211 (Use 3063) Hydrostatic Transmission Output Shaft   3212 (Use 3063) Hydrostatic Transmission Underspeed/ Overspeed Valve   3221 Hydrostatic Power Case   3222 Hydrostatic Pump Head   3222 Transmission Underspeed/ Override Valve   3221 Hydrostatic Power Case   3222 Hydrostatic Pump Head   3223 Transmission Underspeed/ Override Valve   3221 Hydrostatic Power Case   3222 Hydrostatic Pump Head   3223 Transmission Underspeed/ Override Valve   3221 Hydrostatic Pump Head   3220 Hydrostatic Pump Head   3220 Hydrostatic Pump Head   3220	2150 Dower Shift Transmission	1	2152 (Has 2066) Transmission Oil
3157 Transmission Manual Selector Valve 3160 Transmission Manual Selector Valve 3160 Transmission Planetary 3162 Creeper Control 3163 Hydraulic Shift Cylinder 3164 (Use 3068) Oil Filter Base 3166 Rotary Actuator 3167 Transmission Hydraulic Control 3168 Transmission Electronic Control (Includes Fingertip Controls) 3170 Transmission Clutch Piston (Includes Fingertip Controls) 3171 Transmission Manual Switch 3172 Transmission Slave Switch 3173 Transmission Synchronous 3174 Transmission Shift Solenoid 3175 Transmission Speed Sensor 3180 Transmission Priority Valve 3181 Transmission Neutralizer Control 3182 Transmission Lubrication Relief Valve 3183 Transmission Control Lock 3184 Transmission Oil Cooler Bypass 3186 Transmission Planet Carrier Valve 3187 Transmission Planet Carrier 3193 Drive Train High Speed Oil 3194 Transmission Neutralizer 3195 Transmission Dump Valve 3195 Transmission Clutch Plate 3191 Transmission Neutralizer 3192 Transmission Dump Valve 3193 Drive Train High Speed Oil 3194 Transmission Neutralizer 3195 Transmission Dump Valve 3202 Hydraulic Flow Control 3202 Hydraulic Flow Control 3203 Drive Pump 3204 Charge Pump 3205 Servo Control Valve 3205 Servo Control Valve 3206 Manifold/Metering Valve 3211 (Use 3063) Hydrostatic 3212 (Use 3063) Hydrostatic 3213 Charge and Main Relief Valve 3214 Synchronizing Valve 3215 Power Unit Control Linkage 3216 Transmission Underspeed/ Overspeed Valve 3221 Hydrostatic Cines & Hoses 3222 Hydrostatic Pliot Overspeed Valve 3223 Transmission Underspeed/ Overspeed Valve	3150 Power Shift Transmission		Pump
Valve         Step Transmission Planetary         3162 Creeper Control         3163 Hydraulic Shift Cylinder           3164 (Use 3068) Oil Filter Base         3166 Rotary Actuator         3167 Transmission Hydraulic Control (Includes Fingertip Controls)           3168 Transmission Electronic Control (Includes Fingertip Controls)         3169 Transmission Clutch Housing (Includes Fingertip Controls)         3170 Transmission Clutch Piston           3171 Transmission Manual Switch         3172 Transmission Slave Switch (Includes Fingertip Controls)         3173 Transmission Synchronous Switch (Includes Fingertip Controls)         3175 Transmission Slave Switch (Includes Switc	3154 Transmission Lines / Hoses	3155 Transmission Clutches	-
3164 (Use 3068) Oil Filter Base   3166 Rotary Actuator   3167 Transmission Hydraulic Control 3168 Transmission Electronic Control (Includes Fingertip Controls)   3169 Transmission Clutch Housing   3170 Transmission Clutch Piston   3171 Transmission Manual Switch   3172 Transmission Slave Switch   3176 Transmission Synchronous Switch   3174 Transmission Shift Solenoid   3175 Transmission Speed Sensor   3176 Transmission & Transfer Gears   3180 Transmission Priority Valve   3181 Transmission Neutralizer Control Valve   3184 Transmission Neutralizer Control Valve   3184 Transmission Collect Bypass   3186 Transmission Planet Carrier Valve   3188 (Use 3064) Transmission Case   3189 (Use 3063) Transmission Planet Carrier Thrust Disc/Plate   3191 Transmission Neutralizer   3192 Transmission Dump Valve   3193 Transmission Cultch Plate   3194 Transmission Temperature Sensor   3192 Transmission Dump Valve   3193 Transmission Dump Valve   3194 Transmission Temperature Sensor   3202 Hydraulic Flow Control   3203 Drive Pump   3204 Charge Pump   3204 Charge Pump   3205 Servo Control Valve   3206 Manifold/Metering Valve   3207 Servo Cylinder   3211 (Use 3063) Hydrostatic   3212 (Use 3063) Hydrostatic   3213 Charge and Main Relief Valve   3211 (Use 3063) Hydrostatic   3212 (Use 3063) Hydrostatic   3213 Charge and Main Relief Valve   3214 Synchronizing Valve   3215 Power Unit Control Linkage   3220 Hydrostatic Transmission Underspeed/ Overspeed Valve   3220 Hydrostatic Transmission Underspeed/ Overspeed Valve   3220 Hydrostatic Transmission Underspeed/ Overspeed Valve   3221 Hydrostatic Power Case   3222 Hydrostatic Pump Head   3223 Transmission Underspeed/ Override Valve   3220 Hydrostatic Control Underspee		3158 Transmission Auto Selector Valve	3159 Transfer Gear Group
3168 Transmission Electronic Control (Includes Fingertip Controls)   3169 Transmission Clutch Housing   3170 Transmission Clutch Piston   3171 Transmission Manual Switch   3172 Transmission Slave Switch   3173 Transmission Synchronous Switch   3174 Transmission Shift Solenoid   3175 Transmission Speed Sensor   3176 Transmission & Transfer Gears   3180 Transmission Priority Valve   3181 Transmission Neutralizer Control Valve   3182 Transmission Lubrication Relief Valve   3183 Transmission Control Lock   3184 Transmission Oil Cooler Bypass   3186 Transmission Planet Carrier Valve   3188 (Use 3064) Transmission Case   3189 (Use 3063) Transmission Shaft Thrust Disc/Plate   3191 Transmission Neutralizer   3192 Transmission Dump Valve   3193 Drive Train High Speed Oil   3194 Transmission Temperature   3192 Transmission Dump Valve   3193 Drive Train High Speed Oil   3194 Transmission Temperature   3192 Transmission Dump Valve   3194 Drive Train High Speed Oil   3194 Transmission Temperature   3192 Transmission Dump Valve   3194 Drive Train High Speed Oil   3194 Drive Train High Speed Oil   3194 Drive Train High Speed Oil   3194 Drive Transmission Temperature   3192 Transmission Dump Valve   3194 Drive Transmission Planet Carrier   3194 Drive Pump   3204 Charge Pump   3204 Charge Pump   3205 Servo Control Valve   3206 Manifold/Metering Valve   3207 Servo Cylinder   3208 Drive Pump   3204 Charge Pump   3204 Charge Pump   3205 Servo Control Valve   3208 Hydrostatic Control Linkage   3210 High Pressure Relief Valve   3211 (Use 3063) Hydrostatic Control Linkage   3210 High Pressure Relief Valve   3214 Synchronizing Valve   3215 Power Unit Control Linkage   3216 Transmission Underspeed/ Overspeed Valve   3220 Hydrostatic Transmission Speed Control Valve   3221 Hydrostatic Pilot Overspeed Valve   3223 Transmission Underspeed/ Override Valve   3224 Hydrostatic Pilot Overspeed Valve   3223 Transmission Underspeed/ Override Valve   3224 Hydrostatic Pilot Overspeed Valve   3226 Hydrostatic Devenue Carrier   3222 Hydrostatic Pi	3160 Transmission Planetary	3162 Creeper Control	3163 Hydraulic Shift Cylinder
(Includes Fingertip Controls)3172 Transmission Slave Switch3173 Transmission Synchronous Switch3174 Transmission Manual Switch3175 Transmission Speed Sensor3176 Transmission & Transfer Gears3180 Transmission Priority Valve3181 Transmission Neutralizer Control Valve3182 Transmission & Transfer Gears3183 Transmission Control Lock3184 Transmission Oil Cooler Bypass Valve3186 Transmission Planet Carrier Thrust Disc/Plate3188 (Use 3064) Transmission Case3189 (Use 3063) Transmission Shaft3190 Transmission Clutch Plate3191 Transmission Neutralizer3192 Transmission Dump Valve3193 Drive Train High Speed Oil Change Group3194 Transmission Temperature Sensor3192 Transmission Dump ValveHydrostatic Transmission - on hydraulic excavators and equipment with hydrostatic drive or differentic steering, including hydrostatic lines between the pump and motor3202 Hydraulic Flow Control3203 Drive Pump3204 Charge Pump3205 Servo Control Valve3206 Manifold/Metering Valve3207 Servo Cylinder3208 (Use 3073) Hydrostatic Transmission Output Shaft3212 (Use 3063) Hydrostatic Transmission Output Shaft3213 Charge and Main Relief Valve3211 (Use 3063) Hydrostatic Transmission Output Shaft3215 Power Unit Control Linkage3216 Transmission Underspeed/ Overspeed Valve3218 Hydrostatic Lines & Hoses3219 Hydrostatic Pilot Overspeed Valve3220 Hydrostatic Transmission Speed Control Valve3221 Hydrostatic Power Case3222 Hydrostatic Pump Head3223 Transmission Underspeed/ Override Valve	3164 (Use 3068) Oil Filter Base	3166 Rotary Actuator	3167 Transmission Hydraulic Control
Switch 3174 Transmission Shift Solenoid 3175 Transmission Speed Sensor 3180 Transmission Priority Valve 3181 Transmission Neutralizer Control Valve 3183 Transmission Control Lock 3184 Transmission Oil Cooler Bypass Valve 3186 Transmission Planet Carrier 3187 Transmission Planet Carrier 3188 (Use 3064) Transmission Case 3189 (Use 3063) Transmission Shaft 3190 Transmission Clutch Plate 3191 Transmission Neutralizer 3192 Transmission Dump Valve 3193 Drive Train High Speed Oil Change Group 3194 Transmission Temperature Sensor  Hydrostatic Transmission - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor 3202 Hydraulic Flow Control 3203 Drive Pump 3205 Servo Control Valve 3206 Manifold/Metering Valve 3208 (Use 3073) Hydrostatic Control 3209 Hydrostatic Control Linkage 3211 (Use 3063) Hydrostatic 3212 (Use 3063) Hydrostatic 3212 (Use 3063) Hydrostatic 3213 Charge and Main Relief Valve 3214 Synchronizing Valve 3215 Power Unit Control Linkage 3216 Transmission Underspeed/ Overspeed Valve 3218 Hydrostatic Cines & Hoses 3219 Hydrostatic Pilot Overspeed Valve 3220 Transmission Underspeed/ Override Valve		3169 Transmission Clutch Housing	3170 Transmission Clutch Piston
3180 Transmission Priority Valve 3181 Transmission Neutralizer Control Valve 3183 Transmission Control Lock 3184 Transmission Oil Cooler Bypass Valve 3186 Transmission Planet Carrier Thrust Disc/Plate 3188 (Use 3064) Transmission Case 3189 (Use 3063) Transmission Shaft Transmission Clutch Plate 3190 Transmission Clutch Plate 3191 Transmission Neutralizer 3192 Transmission Dump Valve 3193 Drive Train High Speed Oil Sensor  Hydrostatic Transmission - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor 3202 Hydraulic Flow Control 3203 Drive Pump 3204 Charge Pump 3205 Servo Control Valve 3206 Manifold/Metering Valve 3207 Servo Cylinder 3208 (Use 3073) Hydrostatic Control Valve 3211 (Use 3063) Hydrostatic Transmission Unput Shaft Transmission Output Shaft 3212 (Use 3063) Hydrostatic Transmission Unput Shaft 3214 Synchronizing Valve 3215 Power Unit Control Linkage 3216 Transmission Underspeed/Overspeed Valve 3221 Hydrostatic Cover Case 3222 Hydrostatic Pump Head 3223 Transmission Underspeed/Override Valve	3171 Transmission Manual Switch	3172 Transmission Slave Switch	· ·
Valve   Valve   Valve	3174 Transmission Shift Solenoid	3175 Transmission Speed Sensor	3176 Transmission & Transfer Gears
Valve     3187 Transmission Planet Carrier Thrust Disc/Plate   3188 (Use 3064) Transmission Case   3189 (Use 3063) Transmission Shaft   3190 Transmission Clutch Plate   3191 Transmission Neutralizer   3192 Transmission Dump Valve   3193 Drive Train High Speed Oil Change Group   3194 Transmission Temperature Sensor	3180 Transmission Priority Valve	1	l .
Thrust Disc/Plate  3190 Transmission Clutch Plate  3191 Transmission Neutralizer  3192 Transmission Dump Valve  3193 Drive Train High Speed Oil Change Group  3194 Transmission Temperature Sensor  Hydrostatic Transmission - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor  3202 Hydraulic Flow Control  3203 Drive Pump  3204 Charge Pump  3205 Servo Control Valve  3206 Manifold/Metering Valve  3208 (Use 3073) Hydrostatic Control Valve  3209 Hydrostatic Control Linkage  3210 High Pressure Relief Valve  3211 (Use 3063) Hydrostatic Transmission Input Shaft  3212 (Use 3063) Hydrostatic Transmission Output Shaft  3214 Synchronizing Valve  3215 Power Unit Control Linkage  3216 Transmission Underspeed/Overspeed Valve  3221 Hydrostatic Lines & Hoses  3219 Hydrostatic Pilot Overspeed Valve  3223 Transmission Underspeed/Override Valve	3183 Transmission Control Lock	1	3186 Transmission Planet Carrier
3193 Drive Train High Speed Oil Change Group  Hydrostatic Transmission - on hydraulic excavators and equipment with hydrostatic drive or differentia steering, including hydrostatic lines between the pump and motor  3202 Hydraulic Flow Control 3203 Drive Pump 3204 Charge Pump 3204 Charge Pump 3205 Servo Control Valve 3206 Manifold/Metering Valve 3207 Servo Cylinder 3208 (Use 3073) Hydrostatic Control Valve 3209 Hydrostatic Control Linkage 3210 High Pressure Relief Valve 3211 (Use 3063) Hydrostatic Transmission Input Shaft 3212 (Use 3063) Hydrostatic Transmission Output Shaft 3214 Synchronizing Valve 3215 Power Unit Control Linkage 3216 Transmission Underspeed/Overspeed Valve 3218 Hydrostatic Lines & Hoses 3219 Hydrostatic Pilot Overspeed Valve 3220 Hydrostatic Transmission Underspeed/Override Valve		3188 (Use 3064) Transmission Case	3189 (Use 3063) Transmission Shaft
Hydrostatic Transmission - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor  3202 Hydraulic Flow Control  3203 Drive Pump  3204 Charge Pump  3205 Servo Control Valve  3206 Manifold/Metering Valve  3207 Servo Cylinder  3208 (Use 3073) Hydrostatic Control  3209 Hydrostatic Control Linkage  3210 High Pressure Relief Valve  3211 (Use 3063) Hydrostatic  Transmission Input Shaft  3212 (Use 3063) Hydrostatic  Transmission Output Shaft  3214 Synchronizing Valve  3215 Power Unit Control Linkage  3216 Transmission Underspeed/ Overspeed Valve  3218 Hydrostatic Lines & Hoses  3219 Hydrostatic Pilot Overspeed Valve  3223 Transmission Underspeed/ Override Valve	3190 Transmission Clutch Plate	3191 Transmission Neutralizer	3192 Transmission Dump Valve
Hydrostatic Transmission - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor  3202 Hydraulic Flow Control 3203 Drive Pump 3204 Charge Pump  3205 Servo Control Valve 3206 Manifold/Metering Valve 3207 Servo Cylinder  3208 (Use 3073) Hydrostatic Control 3209 Hydrostatic Control Linkage 3210 High Pressure Relief Valve  3211 (Use 3063) Hydrostatic 7ransmission Input Shaft 7ransmission Output Shaft 3214 Synchronizing Valve 3215 Power Unit Control Linkage 3216 Transmission Underspeed/Overspeed Valve 3218 Hydrostatic Lines & Hoses 3219 Hydrostatic Pilot Overspeed Valve 3220 Hydrostatic Transmission Speed Control Valve 3221 Hydrostatic Power Case 3222 Hydrostatic Pump Head 3223 Transmission Underspeed/Override Valve		1 _	
steering, including hydrostatic lines between the pump and motor3202 Hydraulic Flow Control3203 Drive Pump3204 Charge Pump3205 Servo Control Valve3206 Manifold/Metering Valve3207 Servo Cylinder3208 (Use 3073) Hydrostatic Control Valve3209 Hydrostatic Control Linkage3210 High Pressure Relief Valve3211 (Use 3063) Hydrostatic Transmission Input Shaft3212 (Use 3063) Hydrostatic Transmission Output Shaft3213 Charge and Main Relief Valve3214 Synchronizing Valve3215 Power Unit Control Linkage3216 Transmission Underspeed/ Overspeed Valve3218 Hydrostatic Lines & Hoses3219 Hydrostatic Pilot Overspeed Valve3220 Hydrostatic Transmission Speed Control Valve3221 Hydrostatic Power Case3222 Hydrostatic Pump Head3223 Transmission Underspeed/ Override Valve			
3202 Hydraulic Flow Control  3203 Drive Pump  3205 Servo Control Valve  3206 Manifold/Metering Valve  3207 Servo Cylinder  3208 (Use 3073) Hydrostatic Control Valve  3209 Hydrostatic Control Linkage  3210 High Pressure Relief Valve  3211 (Use 3063) Hydrostatic Transmission Input Shaft  3212 (Use 3063) Hydrostatic Transmission Output Shaft  3214 Synchronizing Valve  3215 Power Unit Control Linkage  3216 Transmission Underspeed/ Overspeed Valve  3218 Hydrostatic Lines & Hoses  3219 Hydrostatic Pilot Overspeed Valve  3220 Hydrostatic Transmission Underspeed/ Control Valve  3221 Hydrostatic Power Case  3222 Hydrostatic Pump Head  3204 Charge Pump  3207 Servo Cylinder  3210 High Pressure Relief Valve  3213 Charge and Main Relief Valve  3216 Transmission Underspeed/ Overspeed Valve  3220 Hydrostatic Transmission Speed Control Valve	Hydrostatic Transmission - on hydrostatic	draulic excavators and equipment w	ith hydrostatic drive or differential
3205 Servo Control Valve  3206 Manifold/Metering Valve  3207 Servo Cylinder  3208 (Use 3073) Hydrostatic Control Valve  3209 Hydrostatic Control Linkage  3210 High Pressure Relief Valve  3211 (Use 3063) Hydrostatic Transmission Input Shaft  3212 (Use 3063) Hydrostatic Transmission Output Shaft  3214 Synchronizing Valve  3215 Power Unit Control Linkage  3216 Transmission Underspeed/ Overspeed Valve  3218 Hydrostatic Lines & Hoses  3219 Hydrostatic Pilot Overspeed Valve  3220 Hydrostatic Transmission Speed Control Valve  3221 Hydrostatic Power Case  3222 Hydrostatic Pump Head  3223 Transmission Underspeed/ Override Valve	steering, include	ling hydrostatic lines between the p	ump and motor
3208 (Use 3073) Hydrostatic Control Valve  3210 High Pressure Relief Valve  3211 (Use 3063) Hydrostatic Transmission Input Shaft  3212 (Use 3063) Hydrostatic Transmission Output Shaft  3214 Synchronizing Valve  3215 Power Unit Control Linkage  3216 Transmission Underspeed/ Overspeed Valve  3218 Hydrostatic Lines & Hoses  3219 Hydrostatic Pilot Overspeed Valve  3220 Hydrostatic Transmission Speed Control Valve  3221 Hydrostatic Power Case  3222 Hydrostatic Pump Head  3223 Transmission Underspeed/ Override Valve	3202 Hydraulic Flow Control	3203 Drive Pump	3204 Charge Pump
3208 (Use 3073) Hydrostatic Control Valve  3209 Hydrostatic Control Linkage  3210 High Pressure Relief Valve  3211 (Use 3063) Hydrostatic Transmission Input Shaft  3212 (Use 3063) Hydrostatic Transmission Output Shaft  3213 Charge and Main Relief Valve  3214 Synchronizing Valve  3215 Power Unit Control Linkage  3216 Transmission Underspeed/ Overspeed Valve  3218 Hydrostatic Lines & Hoses  3219 Hydrostatic Pilot Overspeed Valve  3220 Hydrostatic Transmission Speed Control Valve  3221 Hydrostatic Power Case  3222 Hydrostatic Pump Head  3223 Transmission Underspeed/ Override Valve	-	3206 Manifold/Metering Valve	3207 Servo Cylinder
Transmission Input Shaft  3214 Synchronizing Valve  3215 Power Unit Control Linkage  3216 Transmission Underspeed/ Overspeed Valve  3218 Hydrostatic Lines & Hoses  3219 Hydrostatic Pilot Overspeed Valve  3220 Hydrostatic Transmission Speed Control Valve  3221 Hydrostatic Power Case  3222 Hydrostatic Pump Head  3223 Transmission Underspeed/ Override Valve	, , , ,	· · · · · · · · · · · · · · · · · · ·	3210 High Pressure Relief Valve
3214 Synchronizing Valve  3215 Power Unit Control Linkage  3216 Transmission Underspeed/ Overspeed Valve  3218 Hydrostatic Lines & Hoses  3219 Hydrostatic Pilot Overspeed Valve  3220 Hydrostatic Transmission Speed Control Valve  3221 Hydrostatic Power Case  3222 Hydrostatic Pump Head  3223 Transmission Underspeed/ Override Valve	3211 <b>(Use 3063)</b> Hydrostatic	3212 <b>(Use 3063)</b> Hydrostatic	3213 Charge and Main Relief Valve
Overspeed Valve  3218 Hydrostatic Lines & Hoses  3219 Hydrostatic Pilot Overspeed Valve  3220 Hydrostatic Transmission Speed Control Valve  3221 Hydrostatic Power Case  3222 Hydrostatic Pump Head  3223 Transmission Underspeed/Override Valve	Transmission Input Shaft	Transmission Output Shaft	
3221 Hydrostatic Power Case 3222 Hydrostatic Pump Head 3223 Transmission Underspeed/ Override Valve	3214 Synchronizing Valve	3215 Power Unit Control Linkage	•
Override Valve	3218 Hydrostatic Lines & Hoses	3219 Hydrostatic Pilot Overspeed Valve	3220 Hydrostatic Transmission Speed Control Valve
3225 Travel Electronic Control 3226 Downshift Inhibitor	3221 Hydrostatic Power Case	3222 Hydrostatic Pump Head	· ·
	3225 Travel Electronic Control	3226 Downshift Inhibitor	

	Drive Line/Drive Axle	
325A Drive Coupling	3250 Drive Line/Drive Axle	3251 Universal Joint
3252 Flexible Coupling	3253 Drive Shaft	3254 Drive Line Pinion
3255 Gearbox	3256 Bevel Gear/Shaft	3257 Bevel Gear Shaft Bearing
3258 Differential	3259 Axle Shaft	3260 Axle Housing Assembly
3261 Drive Chain	3262 Double Reduction Differential	3263 Limited Slip Differential
3264 Differential Lock	3265 No-Spin Differential	3266 Differential Lock Cylinder
3267 Drive Shaft Support	3268 Axle Housing Support/Trunnion	3269 Pinion Housing
3270 Locking Differential	3271 Transaxle	3272 Differential Lock Control Valve
3273 Differential Lock Actuator Valve	3274 Constant Velocity Universal Joint	3275 Drive Line Brake (see exclusions listed under Braking System section)
3276 Drive Line Brake Disc (see exclusions listed under Braking System section)	3277 Drive Line Brake Lining (see exclusions listed under Braking System section)	3278 Drive Axle
3279 Engine Output Drive Assembly/ Coupling	3281 Bevel Gear Case	3283 Differential Case
3284 Differential Carrier	3287 Interaxle Differential	3288 Anti-Spin Control
3290 Differential Temperature Sensor	3291 Drive Axle Oil Pump	3292 Differential Lock Pump
Countershaft Transm	ission – of the 3400 Assembly, EPP	covers the following:
	3401 <b>(Use 3064)</b> Countershaft Transmission Case	3402 <b>(Use 3066)</b> Countershaft Oil Pump
3403 Countershaft Lines/Hoses	3404 (Use 3155) Countershaft Clutches	3405 (Use 3169) Countershaft Clutch Housing
3406 (Use 3170) Countershaft Clutch Piston	3407 (Use 3159) Countershaft Transfer Gear	3408 (Use 3063) Countershaft Shaft
3409 (Use 3075) Countershaft Output Gears	3410 (Use 3077) Countershaft Brake	3412 (Use 3074) Countershaft Pressure Control Valve
3413 Countershaft Transmission Control Linkage	3414 Countershaft Transmission Ratio / Directional Selector	3416 Countershaft Transmission Pneumatic Control
3417 <b>(Use 3167)</b> Hydrostatic Control Groups	3418 (Use 3168) Electrical Control Groups	
	Drive Train	
4001 Final Drive & Brake Wheel (see exclusions listed under Braking System section)	4003 Final Drive, Steering Clutch, & Brake	4004 Brake & Axle
4005 Steering & Braking System	4006 Wheel & Brake Assembly	4007 Steering & Brake Pump
4008 Final Drive, Brake & Wheel Pump	4009 Final Drive, Brake & Differential Steering Planetary	4010 Final Drive, Brake & Differential Steering Drive
4011 Final Drive & Brake	-	-
	Final Drive	
4050 Final Drive & Torque Hub	4051 Final Drive & Wheel	4052 Final Drive Seal
4053 Drive Axle Hub/Gear Assembly	4054 Final Drive Hub	4055 Final Drive Gears
4056 Final Drive Shaft	4057 Final Drive Pinion Flange	4058 Sprocket Shaft/Bore

63 Tandem/Single Drive Chain 68 Tandem Drive Stub Axle 73 Tandem Drive Driven Sprocket 76 Tandem Drive, Bevel Gear, &	4064 Tandem Drive Housing 4069 Final Drive Chain 4074 Final Drive - Outer Section 4084 Final Drive Planet Carrier Hub/
73 Tandem Drive Driven Sprocket	4074 Final Drive - Outer Section
'	
76 Tandem Drive, Bevel Gear, &	4084 Final Drive Planet Carrier Hub/
al Drive	Ring Gear
92 Planetary Final Drive Carrier	4093 Final Drive Planet Carrier Thrust Surface
92	

### Steering Clutch & Brake Machines – Components on track-type equipment only, if so equipped. Of the 4100 Assembly, EPP covers the following:

	4101 Steering Clutch	4102 Steering Clutch Control Valve
4103 Steering Clutch Control Pump	4104 Steering Clutch & Brake Control Lines	4105 Steering Clutch Booster
4106 Steering Clutch Control	4108 Steering Clutch Relief Valve	4110 Brake Band
4111 Track Brake Control Valve	4112 Track Brake Control Valve	4113 Track Brake Drum
4114 Track Brake Booster	4115 Brake Actuating Mechanism	4116 Brake Hand Pump
4117 Steering Clutch Case	4118 Steering Clutch Release Piston	4119 Steering Clutch/Bevel Gear & Shaft
4120 Steering Clutch & Brake Control Valve	4121 Brake Lubrication Relief Valve	4122 Steering Clutch & Brake Linkage (see exclusions listed under Braking System section)
4123 Steering Clutch Hub	4124 Steering Clutch, Bevel Gear Shaft, & Pinion	

Differential Steer Machines		
4129 Differential Steering	4130 Differential Steering Planetary	4131 Differential Drive & Brake
4132 Planetary & Brake	1	4135 Differential Steering & Transmission Control

#### **Braking System**

- Brake Components for track-type equipment, only if they also provide steering Examples include:
  - 1. Hydrostatic Drive Machine Steer
  - 2. Torque Divider Powertrain with differential steer
  - 3. Clutch/brake steer
- Service Brake Components are limited to those parts that are internal to a covered Powertrain component, such as a powered axle assembly or differential steering housing
- · Brake Seals and Gaskets that serve to prevent fluid cross contamination of a Powertrain component
- Exclusions: Service Brake Components External brake components that are accessible without disassembly of a Powertrain component are not covered (i.e. brake linkage and control valves). Wear items, including but not limited to, discs, plates, and linings, either internal or external.

4251 Service Brake Assembly	4252 Brake Drum Assembly	4253 Brake Shoes Assembly
Excluding wear items - See	Excluding wear items - See	Excluding wear items - See
clarifications above	clarifications above	clarifications above.

4254 Brake Lining Assembly Excluding	4255 Brake Disc Assembly Excluding	4256 Brake Caliper/Head Assembly
wear items - See clarifications above	wear items - See clarifications above.	Excluding wear items - See clarifications above.
4257 Brake Lines	4258 Brake Master Cylinder	4259 Hydrovac
4260 Wheel Cylinder	4261 Brake / Slack Adjuster	4262 Brake Actuator
4263 Brake Accumulator	4264 Brake Accumulator Charging	4265 Service Brake Control Valve
4203 Blake Accumulator	Valve	4205 Service Brake Control Valve
4266 Brake Booster	4267 Parking Brake	4268 Brake Pump
4269 Service Brake Control	4270 Brake Expander Tube	4271 Selector Brake Valve
4272 Brake Air Tank	4273 Friction Pad Assembly Excluding wear items - See clarifications above	4274 Brake Control Neutralizer Valve
4275 Brake Return Check Valve	4277 Brake Air Over Cylinder	4280 Brake Air Relay Valve
4281 Brake Air Check Valve	4283 Quick Release Valve	4284 Parking Brake Control
4285 Air Dryer	4286 Brake System Diverter Valve	4287 Vacuum Pump
4288 Interver Valve	4289 Brake Shuttle Valve	429B Brake Balance Valve
429T Brake / Axle Oil Temperature Sensor	4290 Treadle Brake Control Valve	4291 Brake Hydraulic Reservoir
4293 Accumulator Bleed Valve	4294 Automatic Electronic Traction Aid	4296 Brake Differential Pressure Switch
Ste	eering System (Hydrostatic & Diff-Sto	eer)
4304 Steering Lines / Hoses	4305 Steer Linkage	4306 Steering Pump
4307 Steering Valve	4312 Steering Metering Pump	4313 Steering Axle
4318 Tie Rod	4320 Steering Flow Divider Valve	4322 Steering Relief Valve
4341 Steering Cooler Pump	4342 Steering Pilot Valve	4343 Steering Control
4344 Steering Charge Pump	4346 Steering Oil Cooler	4347 All Wheel Steer Valve
	lic excavators and equipment with had be a consistering the part of the part o	
4350 Hydrostatic Drive	4351 Hydraulic Propel/Drive Motor	4352 Drive Control Valve
4353 Hydrostatic Drive Parking Brake	4354 Brake Release Pump	4355 Hydrostatic Drive Gear Reducer
4356 Brake & Shift Valve		
	Electric Power Generator	
4458 Brushes	4466 Surge Suppressor	4467 Voltage Regulator Assembly/Tray
4468 Series Boost	4470 Exciter Field	4471 Generator Bearing
4473 Rectifier Module	4474 Regulator Module	4475 Voltage Droop Transformer
4476 Current Transformer	4477 Excitation Transformer	4480 Uninterruptable Power Supply
4481 Permanent Magnet Pilot Exciter	449C Programmable Logic Controller	
	<b>Drive Train Electronic Control</b>	
4801 Traction Control System	4803 Wheel Speed Sensor	4804 Brake Proportional Solenoid Valve
4805 On/Off Pilot Solenoid Valve	4806 Articulation Angle Position Sensor	4807 Brake Pressing Reducing Valve
4808 Drive Train Electronic Control Module	4809 Brake Position Sensor	4810 All Wheel Drive Electronic Control
4811 Electronic Traction Control	4812 Drive Train Electronic Control	4815 Drive Control Manual Override

4820 Drive Train Software	4823 Electronic Current Sensor	4824 Solenoid Driver
4020 Drive Halli Sulware	1 4020 Electronic Current Sensor	1 4024 Soleliola Dilvei
	Hydraulic System	
5055 Van Pump	5058 Hydraulic Motor, Piston-Type	5059 Pilot Control Valve
occo varri unip	(Associated Only with Hydrostatic Transmission or Differential Steer)	Sood Filet Control Valve
5060 Swivel	5062 Hydraulic Pump Coupling	5069 Main System Relief Valve
5070 Hydraulic Pump, Piston-Type (Associated Only with Hydrostatic Trans. Or Differential Steer)		
	Air Control System	
5511 Air System Electronic Control	5512 Air Pressure Switch	5513 Air Ratio Valve
Correction Electronic Control	00.12.7 til. 1 100001.0 01110.11	001071
	Gauges & Indicators	
7498 Thermocouple		
	Engine Electronic Control Syste	m
191N Nitrogen Oxide Sensor	191W Jacket Water Outlet Pressure Sensor	
Paving Equipm	ent Only: Excluded are belts, chair	ne and rotor brakes
5630 Rotor Axle	5631 Rotor Drive	5632 Rotor Drive Shaft
5633 Rotor Drive Differential	5635 Rotor Transmission	5636 Rotor Drive Electric Shift
5651 Vibratory Motor	5652 Vibratory Pump	5653 Vibratory Control Valve
	5655 Drum Drive Gear Reducer	5656 Drum Support Gear Box
5658 Countershaft Drive	6605 Compactor Drum	6606 Vibration Mechanism
3168 Propel ECM	3168 Propel Speed Dial Buffer	3168 Propel Lever
3168 Speed Dial	3168 Steering PWM Sensor	3168 Brake PWM Sensor
5070 Pump EDC Control	5058 Track Speed Sensor	
		·
Compact Constru	iction Equipment (CCE) Powertrain	(MTL/CTL/MHE) only:
4164 Drive Sprocket	4166 Sprocket Dust Guard	4197 Roller Frame Tensioning System
4159 Idler Wheels	4192 Bogie Wheels	4180 Track Rollers
4154 Carrier Rollers	4158 Recoil Spring	4157 Track Adjuster
1351 Radiator and Oil Cooler		
Electric Prince Per	Jortzain Notas Balta abaina and water	or brokoo oro eveluded
	vertrain Note: Belts, chains and rote	
1410 Voltage Reg	1421 DC To DC Converter	1437 Electrical System Resistor
1603 Traction Drive Motor	1607 Drive System Contactor	1617 Drive System Thyristor/Transisto
1618 Drive System Rectifier/Diode	1619 Drive System Capacitor	1627 Drive System Resistor
1633 Drive system Power Cable	1636 Drive Motor Fan	3121 Retarder Extended Braking Control
3225 Travel Electronic Control	3279 Engine Output Drive	4018 Propulsion Module
425R Electric Retarder Group	4450 Generator	4453 Stator

4454 Excitor/Arm	4456 Generator Drive Coupling	4457 Rotor
4459 Cable or Wire	445B Bus Bar	4465 Rotating Rectifier Diode
4802 TCS Electro Control	4822 Inverter	7611 Optical Interface Control Module
	Special Service Claim Categories	
7729 HEUI Actuation		
	Emissions Module	
These additional components are include Emissions Module (CEM).	ed only when used to control emissions or	when part of the Caterpillar Clean
1061 Exhaust Piping	1071 Air Lines/Pipe	108A Solenoid Valve
108B Combustion Body	108C Clean Gas Induction Cooler	108E Exhaust Combustion Lines
108F Diesel Particulate Filter (DPF)	108G Exhaust Cooler	108H Diesel Exhaust Fluid Module
108I Diesel Exhaust Fluid Injector	108J Diesel Exhaust Fluid Pump	108L Boost Pressure Line
108N Clean Gas Induction Valve	1080 Exhaust Gas Recirculation High Temperature Cooler Core	108P Exhaust Back Pressure Valve
108Q Exhaust Gas Recirculation Low Temperature Cooler Core	108R NOX Reduction System Air Inlet	108S Combustion Air System
108T Diesel Exhaust Fluid Tank	108V Venturi	108M Exhaust combustion Manifold
1091 Catalytic Converter	1274 Fuel Supply/Return Line	1335 Particle Sensor
1380 Coolant Lines (of the Emissions Module related to DEF)	1408 Wiring Harness - included in Powertrain EPP only if part of the Caterpillar Clean Emissions Module (CEM).	1554 Coil
1702 Fuel Manifold	3206 Manifold/Metering Valve	4493 Relay (of the Emissions Module related to DEF)
5506 Air Control Valve		
Oth	er Implements & Machine Compone	ents
7063 Swing Gear/Bearing		
	Rail/Road Wheeled Excavator only:	
4321 Steering Knuckle	5713 Electric Hydraulic Pump	

### **Additional Coverage Clarifications**

• Electronic controls and sensors which function to direct power for the purpose of moving the machine are included. This includes power shift controls, engine pressure controls, differential lock, finger-tip controls, and wiring connectors that are part of the designated Powertrain components.



#### **SERVICE**

# **Equipment Protection Plan**

Global

### **Machine & Cat Utility Vehicle**

### **Premier Equipment Protection Plan (EPP)**

#### Overview

This coverage bulletin defines the components that are covered under various new and used (Cat® Certified Used Equipment Protection Plan (EPP) in EAME only), equipment programs offered through Caterpillar.

Refer to the Standard Machine Warranty and applicable program bulletins for covered component failures during the standard warranty period and refer to this Premier EPP for covered component failures during the EPP coverage period.

#### **Components Covered Under Premier EPP**

EPP provides dealer reimbursement for parts and/or labor for covered defects in Caterpillar material and manufacturer workmanship. Repairs must be completed by a Cat authorized dealer.

Coverage for defects in Cat material and manufacturer workmanship as defined by EPP means the failure of any original or Cat approved replacement part to work as designed in normal service, providing proper maintenance was received as recommended in the applicable Caterpillar manuals, including the Operation and Maintenance Manual (OMM) and other applicable service literature. Mechanical breakdown means the failure of any original or replacement part covered by EPP to work as it was designed in normal service, providing it has received customary maintenance as recommended by the manufacturer. Any mechanical breakdown and resultant damage caused by failure of a non-covered component (including Yellowmark<sup>TM</sup>, A Caterpillar Brand and Cat<sup>®</sup> Classic brand parts) are not eligible.

**Premier EPP** is a component coverage that includes the components covered by:

- Powertrain EPP (Bulletin 8.01)
- Hydraulic EPP (Bulletin 8.02)
- Hydraulic and Technology EPP (Bulletin 8.10)

Where applicable, and additional components not excluded by this bulletin.

**Note:** Beginning January 1, 2020, Cat Screeds will be included for coverage under Premier EPP if a customer elects to purchase EPP for a Cat Asphalt Paver. All current (non-expired or cancelled) Premier EPP will be grandfathered into this added Screed coverage. Only claims occurring after this date will be approved. Only Cat branded Screeds sold with and connected to Cat Asphalt Pavers are eligible for coverage. Only the original Cat Screed sold with the machine (factory consist & first mount) is eligible. Multiple Screeds cannot be covered under one Premier EPP. All exclusions listed in this bulletin such as "wear out" apply to the Screed.

➤ 08.03-04 (11/19)

➤ Indicates change.

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Dealer and Dealers are defined as any Cat Authorized Dealer or Cat Authorized Repair Representative.

#### **Components Excluded Under Premier EPP:**

- 1) Service Items Service items are excluded for defects in material and workmanship under Premier EPP
- Service/maintenance items include oil, coolant, hydraulic fluids, filters, spark plugs, certain belts, and/or other items listed on the Operations and Maintenance Manual (OMM).
- Service items replaced in the normal course of the repair or inspection, are not reimbursable.
- For additional service items that are excluded, refer to the Global Service Warranty Guide located at warranty.cat.com
- Service items are reimbursed under Premier EPP only when a covered component failure causes resultant damage to the service item.
- 2) Maintenance Items specific maintenance intervals & requirements are defined within the OMM for each individual model. Any procedures or scheduled replacement parts outlined within the "Maintenance" section of the OMM are excluded from Premier EPP. This would include inspections, testing, adjustments, repairs, replacement, or rebuild.

Exclusions examples include, but not limited to:

- V-Belts and Serpentine Belts
- Filters & Elements
- Fuses
- Windshield Wiper Blades
- Lamps, Lights & Light Bulbs (excluding LED Light Assemblies)
- Paint/Decals
- Weld Maintenance Structural Repairs (certain models)
- Planned component replacement
- Driveline wear items
- Service Brake Components external brake components that are accessible without disassembly of a Powertrain component are not covered (i.e. brake linkage and control valves). Wear items, including but not limited to, discs, plates, and linings, either internal or external

For additional maintenance items that are excluded, refer to the Global Service Warranty Guide.

Maintenance items are reimbursed under **Premier EPP** only when a covered component failure causes resultant-damage to the maintenance part.

#### 3) Other Excluded Components:

- Glass
- Lenses
- Radios
- Hydraulic Line Quick Connect/Disconnect Components on CCE Machines
- Attachments, work tools and modifications: serialized or non-serialized Cat products added to the
  equipment. Examples include but are not limited to: buckets, winches, augers, ground engagements, etc.
  Some products may have separate and optional EPP coverage
- Modifications: Any reconfiguration of or addition to the equipment
- Undercarriage Components on track-type and track belt machines including sprockets, drive wheels, track
  assemblies, track belts, track rollers, mid-wheels, idlers, roller frames tensioning system and nonpowered axles
  - Some of these exclusions do not apply to Multi Terrain Loader (MTL), Compact Track Loader (CTL)
    and Mini Hydraulic Excavators (MHEX) products. For MTL/CTL/MHEX machines, see the list of
    additional components included in the Powertrain EPP Service Management Control System (SMCS)
    codes section

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### 4) Components or Systems Covered by Other Caterpillar Warranty Statements and therefore excluded from EPP:

Examples include, but not limited to:

- Batteries
- Cat Work Tools
- Mobil-trac<sup>™</sup> belts
- Rubber track used on Compact Construction Equipment (CCE).
- · Machine Control & Guidance
- Cat Tires
- Service Tools and Supplies
- Yellowmark<sup>™</sup>
- Moving Undercarriage (Refer to Cat Parts Warranty and Undercarriage Assurance bulletins)
- Ground Engaging Tool (GET) (Refer to bulletins 4.03)
- Long-Life Weld-On Landfill Compactor Plus Tip (Refer to bulletin 4.03)

For a complete list of additional Components or Systems that are excluded, refer to the Global Service Warranty Guide located at <u>warranty.cat.com</u>.

### 5) Components Covered by Any Other Manufacturers' Warranty Statements and are therefore excluded by Premier EPP:

If an Original Equipment Manufacturer (OEM) other than Caterpillar has a warranty in place for the equipment, claims should be filed and settled with that OEM prior to submitting supplemental EPP claims.

Examples include, but not limited to:

- Other Manufacturer Tires
- Other Manufacturer Hammers
- Timberking™ Products
- Forestry Work Tools
- Ag Products
- Trimble
- Torc Robotics

#### 6) Cat Utility Vehicle (CUV) Specific Components:

Premier EPP covers only the base CUV and excludes additional components incremental to the base model(s). In addition to the applicable exclusions listed throughout this bulletin, the following CUV specific items are also excluded:

- Powertrain & Driveline Wear Items, Clutch, Spark Plugs, CV Boots, Brake Pads, & Drive Belts Electrical Accessories
- Bumpers, Guards & Attachments
- Doors, Roofs, & Attachments
- Mats & Flaps
- Mirrors, Windshields & Body Panels
- Work Tools & Product Attachments & Accessories

#### **General Exclusions and Limitations**

Premier EPP does not cover the following:

Operator abuse, neglect, improper or abusive use of the machine including, but not limited to, the failure
to perform the recommended preventive maintenance as specified in the applicable Caterpillar manuals,
including the OMM and other applicable service literature

- · Applications not approved by Caterpillar
- Operation beyond the design and/or capacity of the machine
- Wear-out and normal deterioration in performance, accelerated wear-out of components due to operating technique or application; including, but not limited to, oil consumption and gasket or seal leaks
- Chemical corrosion and physical or mechanical erosion
- Unauthorized fuel setting changes
- A mechanical breakdown caused by, or a result of, acts of war, vandalism, riot, theft, explosion, collision, fire and/or any other act of nature, person or vermin
- Operating equipment with improper, contaminated, or improper levels of fuel or fluids, or the use of improper filters
- Modifications, unless the modifications were authorized at the request of Caterpillar and performed at an approved repair facility
- Replacement, adjustments, or alignment or any part not covered by this agreement, lube oils, grease, coolant, or air conditioner refrigerant
- Normally scheduled preventive maintenance or maintenance services, including, but not limited to, valve lash adjustments and maintenance items including filters, fuel nozzles, fuel injectors, thermostats, and seals and gaskets
- Operating at performance settings other than the standard Caterpillar specification
- Accelerated wear-out of components due to operating technique or application
- Physical damage to any product resulting from causes other than mechanical breakdown
- Any repairs if the service meter has been stopped or altered or misrepresents the equipment's actual usage
- Mechanical transportation or towing costs or field service travel expenses, unless Travel Equipment Protection Plan (Americas North, EAME) is purchased. See bulletin 8.04
- Loss of time, inconvenience, downtime or downtime-related expenses or other incidental or consequential loss that results from a defect in material or workmanship
- Any costs incurred to improve operating performance due to normal wear and tear
- Storage or miscellaneous shop supplies
- Freight
- Taxes
- Any cost covered by any warranty of the manufacturer including emissions warranty or repairer's guarantee regardless of whether the warranty or repairer's guarantee is honored
- Performance complaints including, but not limited to, adjustments to fuel settings or electronic unit injectors to comply with emissions standards under Environmental Protection Agency or similar national, federal, provincial or state law
- Any costs incurred for the manufacturer to comply with emissions standards under the Environmental Protection Agency or similar national, federal, provincial or state law
- Failure to use fuels and lubricants that meet or exceed the minimum specification requirements of the manufacturer as specified in the operations manual or other technical bulletins
- Dealer rework or dealer workmanship issues relating to previous repairs
- Modifications including any reconfiguration of or addition to the equipment
- Non-serialized Work Tools and other attachments shipped with the equipment are generally excluded from EPP coverage unless specifically identified as covered components within applicable warranty statement

#### **Emissions Components**

In U.S., Canada, Virgin Islands, Puerto Rico, and South Korea certain parts and/or components may qualify for Manufacturer Emissions Warranty in accordance with the United States Environmental Protection Agency (US EPA) and the California Air Resources Board (ARB). The South Korea Clean Air Conservation Act requires Caterpillar to provide an emission warranty to end users; for engines used in certain construction equipment operated and repaired in South Korea.

Bulletin 7.01 explains the details of Manufacturer Emissions Warranty and the claiming procedures for emissions components.

Unless otherwise specified, upon expiration of the Manufacturer Emissions Warranty, certain parts are included in EPP and covered for defects in Cat material and manufacturer workmanship according to the normal EPP guidelines. See applicable EPP Coverage Bulletins for information regarding emissions components that are beyond the terms of Manufacturer Emissions Warranty and are enrolled in a Caterpillar EPP.

# Claiming Practices for Service Letters PIP/PSP on Machines Covered by the New Machine EPP

- Product Improvement Programs (PIP) and Product Support Programs (PSP), performed on equipment covered by this program must be claimed under the appropriate PIP or PSP
  - Do not claim these repairs under the EPP. Refer to Bulletin 1.16 Service Letters (PIP/PSP) for additional information
  - EPP only applies to the customer participation portion of the after-failure PSP that exceeds the Service Letter limit

#### Wear-out and Extent of Coverage

Wear-out and/or deterioration of any component are not covered by Premier EPP.

The intent is not to restore the product to a "like new" condition, but rather to restore the product to its operating condition just prior to the covered failure. Premier EPP covers only the repair or replacement of the failed component and any resultant damaged parts. Other parts removed in the process of repair will be reinstalled as-is unless the customer authorizes and funds any additional replacement cost.

**Example:** While performing a **Premier EPP** repair for a piston ring failure, the dealer service technician notices the v-belts and coolant hoses are worn and deteriorated. The service technician also notices some wear (within acceptable limits) on the cylinder head valve guides. In addition to the piston ring failure, the service technician replaces the v-belts and coolant hoses and reconditions the valve guides to avoid future downtime.

In this example the v-belts, coolant hoses and valve guide reconditioning cannot be claimed to Caterpillar because they did not have a defect, nor were they damaged as a result of the piston ring failure. They were repaired or replaced as a result of the Customer Responsibilities for assuring all recommended preventative maintenance is performed.

**NOTE:** If the piston ring failed due to abuse (running without changing oil at the proper interval), the ring failure and resultant damage would not be due to a Caterpillar defect, and therefore, not a covered failure.

#### **Customer's Responsibilities**

- Operating the product properly and within the limits of intended capacity and application
- Fueling, lubricating, adjusting, operating, and maintaining the equipment as instructed by the dealer and
  in accordance with the recommendations set forth in the applicable Caterpillar manuals, including the
  Operation and Maintenance Manual and other applicable service literature
- Notifying the dealer promptly if a problem exists
- · Giving timely notice of a problem
- Promptly making the product available to the dealer for warranty repairs and product improvement programs

Premier EPP program does not cover failure of any components if Customer's Responsibilities are not followed. The dealer may be required to provide proof of compliance with the maintenance schedules, at the time of a failure. Proof may include receipts or copies of work orders or invoices showing the performed maintenance services.

#### **Dealer Responsibilities**

Confirm that the equipment has not experienced a failure prior to the EPP coverage start date. If a failure
exists, the equipment must be repaired prior to registering it for EPP.

- Repair equipment using the most economical method and install only genuine Cat® parts.
- Keep on file the applicable inspection and all parts and labor invoices relative to required repairs.
- Pay for any loss in excess of what is covered by EPP if broader coverage was offered to the customer.
- Register equipment for EPP and pay applicable fees.

#### **Parts Book Component Codes**

At the bottom of each page on all Cat Parts Books (paper or electronic), is printed a four-digit numeric SMCS component code. These component codes are used to describe the area of primary use for the parts and/or components listed on that page.

**NOTE:** Sometimes a parts book page with an acceptable Premier EPP component code will include parts that are not covered or may include parts that are broken out on another parts book page. Additionally, there may be instances of a non-acceptable component code containing parts that may qualify for powertrain coverage. For clarification regarding coverage, please submit a ticket through the Warranty Service Desk.

#### **Use of Part Book Component Code on Labor Lines**

Some codes may indicate the use of a substitute code. Substitute codes apply only when using the component code on a labor expense line, if labor reimbursement is applicable.

For example: 1299 Hydraulic Timing Advance (use 1272)

Using a canceled component code on a labor expense line will cause the entire service claim to be canceled.

NOTE: Refer to Bulletins 1.06 and 1.09 for proper group number and labor line SMCS code usage.

#### Claiming Example for Hydraulic Couplers and Hydraulic Coupler Cylinders

Note: Two separate claims are required.

#### Claim #1

- Submit a standard warranty claim for parts only
- Serial number: Hydraulic coupler serial number
- NOTE: All other claiming fields are to be populated per standard process

#### Claim #2

- Submit a claim for labor only
- Serial Number: Machine Serial Number
- Description Code: Enter 38
- Claim Story: Claim Story should reference parts claim and must provide associated claim number. It should also include original claim number and dealer code from the associated standard warranty claim for parts only.
- NOTE: All other claiming fields are to be populated per standard process