#### Overview

This Schedule defines the New Machine Equipment Protection Plan (EPP) Program available through this Customer Value Agreement (CVA) for new machines with Standard Machine Warranty.

This Schedule defines the Powertrain, Hydraulic, and Technology components that are covered under new equipment programs offered through this CVA.

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

Hydraulic components are the components on equipment that are associated with steering and implement control.

Technology components are certain components on the equipment that are associated with Cat Connect Productivity Solutions: Compact, Grade, Link, and Payload.

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

Coverage for defects in Caterpillar material and manufacturer workmanship as defined by this Schedule 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 this Schedule 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> and Classic<sup>TM</sup> brand parts) are not eligible.

### Standard Factory Warranty Coverage Terms

EPP provides coverage beyond Standard Machine Warranty for parts and labor. The coverage term for the New Machine EPP starts from the product delivery date and includes the standard machine warranty. Coverage under the EPP Program does not change the standard machine warranty. The EPP expires when the length of time (measured in months) or the machine hour usage is reached, whichever comes first. Your CVA specifies the applicable EPP month and hour limit.

#### **Emissions Components**

In the United States, 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.

Contact your dealer for more details regarding the 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 material and workmanship according to the normal EPP guidelines.

#### Coverage for Parts Replaced or Repaired Under EPP

New, remanufactured, or Caterpillar approved replacement parts provided under the terms of this EPP are warranted for the remainder of the EPP period applicable to the product in which installed as if such parts were original components of that product. The parts warranty on replaced or repaired parts ceases when the EPP coverage expires.

#### **Wear-out and Extent of Coverage**

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

**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.

**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 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 Schedule 2, the OMM, and any other dealer provided 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 to reduce further damage
- 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

**EPP** does not cover failure of any components if Customer Responsibilities are not followed. The customer 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.

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

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) 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, 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 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 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
  - o Rubber track used on Compact Construction Equipment (CCE).
  - Machine Control & Guidance
  - Cat Tires
  - Service Tools and Supplies
  - o Yellowmark™
  - Moving Undercarriage (Refer to bulletins 5.01 & 5.02)
  - o Ground Engaging Tools (GET) (Refer to bulletin 4.03)
  - o 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
  - o Timberking™ Products
  - o Forestry Work Tools
  - o Ag Products
  - o Trimble

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

On most pages of all Cat Parts Manuals (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 EPP:

**Powertrain Coverage:** 

► I. BASIC ENGINE		
Engine - components essential to engine operation		
1002 Power Pack	1007 Engine & Flywheel Clutch	1014 Engine & Output Drive Assembly
1017 Engine & Pump Drive	1020 Long Block	1025 Engine, Transmission, Cooling Pkg
	ir Induction & Exhaust Syst	
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 (wear out or physical damage related failures is not covered)	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 1094 Plenum	1088 Exhaust Gas Valve 1096 Oxygen Sensor	1092 Flame Arrestor
100 Tribitati		

Cylinder Head Assembly – of the 1100 Assembly, EPP covers the following:		
	1101 Cylinder Head	1102 Rocker Shaft
	Casting	Assembly
1103 Valve Seat/Insert	1104 Valve Guide	1105 Inlet/Exhaust Valve
1106 Prechamber/Nozzle	1107 Valve Cover	1108 Valve Spring
Adapter	Trov valvo Gover	Troo vaivo opinig
1109 Valve Rotator	1110 & 1111 Camshaft	
1112 Camshaft Bearing	1113 Camshaft Housing	1114 Spark Plug Adaptor
l i i z camonan zcamig	Assembly	The opain rag / taapta.
1115 Water Director	1117 Threaded Insert	1118 Compression
1110114101211011	The fire add most	Release
	1120 Valve Cover Base	1121 Valve Bridge
1123 Rocker Arm	1124 Cylinder Head	1125 Injector Sleeve
1120 Rooker / time	Gasket	1.20 injuster closve
1126 Cylinder Head	1129 Engine Brake (of the	
Manifold	Engine Brake Group)	
Marinola	Engino Braite Group)	
	Front and Rear Covers	
1150 Front & Rear	1162 & 1166	1155 Brakesaver Group
Covers	Cover/Housing	
1156 Flywheel	1157 Flywheel Housing	1158 Flywheel Ring Gear
1159 Brakesaver Control	1160 Crankshaft Front	1161 Crankshaft Rear
Valve	Seal	Seal
1162 Timing Gear	1163 Timing Gear Housing	1164 Engine Output
Housing	Plate	Transfer Gear
1165 Engine Power	1166 Timing Gear Housing	1167 Flywheel Housing
Takeoff Drive	Cover	Scavenge Pump
Short Block – of t	he 1200 Assembly, EPP cov	vers the following:
	1201 Cylinder Block	1202 Crankshaft
1203 Crankshaft Main	1204 Crankshaft Gear	1205 Crankshaft
Bearing		Damper/Pulley
1206 Timing/Accessory	1207 Accessory Drive	1208 Push Rod
Gears		
1209 Camshaft	1210 Camshaft	1211 Camshaft Bearing
Roller/Follower/Lifter		3
1212 Camshaft Gear	1213 & 1214 Piston &	
	Liner	
1215 Piston Rings	1216 Cylinder Liner	1217 Liner Seat/Insert
1218 Connecting Rod	1219 Connecting Rod	1220 Balancer
	Bearing	
1221 Spacer Plate	1222 Cylinder Block	1223 Cylinder Block
	Sleeve	Cylinder
1224 Cylinder Block Main	1225 Piston & Connecting	1230 Crankshaft Main &
Bearing Bores	Rod	Rod Bearings
1231 Crankshaft	1232 Crankshaft Thrust	1233 Crankcase
Counterweight	Plate	Explosion Relief Valve
1234 Idler Gear	1237 Engine Stub Shaft	1239 Cylinder Pack
1240 Block Underframe	1241 Timing Chain/Belt	1242 Pump Drive
	<b>y</b>	I

	Fuel System – of the 1250 system, EPP covers the following:			
125H High Pressure Fuel Pump		1251 Fuel Injection Pump		
1252 Fuel Injection Lines	1253 Fuel Injection Pump	1254 Fuel Injection		
-	Housing	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	1272 Timing Advance	1275 Air Control Valve		
1276	1278 Air/Fuel Ratio	1281 Fuel Injection		
Decelerator/Accelerator	Control	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			
	Lukuisatian Orotana			
40004 011 04 14 15 17 17 17 1	Lubrication System	4004 F O'I D		
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 Prelube 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			
Cooling System				

135D Coolant Diverter	135V Thermostatic Valve	1355
Valve		Thermostat/Regulator
1357 V-Belt Pulley	1356 Fan & Fan Drive	1358 Fan Belt Tightener
Assembly (Excluding		
maintenance items or		
wear out related failure.		
Does not include		
serpentine V Belt).		
1359 Fan Drive Assembly	1361 Jacket Water Pump,	1362 Water Manifold
	Drive Group	
1363 Aftercooler Water	1364 Water Pump Impeller	1365 Brake Oil Cooler
Pump		
1366 Brake/Torque	1368 Retarder Cooler	1370 Cooling System
Converter Cooler		Relief Valve
1371 Auxiliary Raw	1373 Water Pump	1374 Hydraulic Oil Cooler
Water Pump	Housing	-
1375 Powertrain Oil	1375 Torque	1376 Torque Converter
Cooler (replaced 3019)	Converter/Transmission	Trans. & Hydraulic Cooler
	Cooler	
1378 Engine Oil Cooler	1379 Heat Exchanger	1384 Water Pump Pulley
1385 Raw Water Pump	1386 Hydraulic Fan Motor	1387 Hydraulic Fan Pump
Drive		
1389 Water Pump Shaft	138R Fan Reversing Valve	1390 Auxiliary Fan Drive
	Electric System	
1404 Generator	1406 Charging System	1411 Disconnect Switch
	(Note: Does not include	
	Alternator or Alternator	
	Group)	
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		
1500 0	Ignition System	
1563 Combustion Sensor		
	Electronic Drive & Control	I
1611 Directional Switch	1613 Drive Axle Control	
Assembly	Unit	
Engine Electronic Control (ECM) System – of the 1900 Assembly, EPP covers the following:		
	1901 Electronic Control	1902 Ratings Personality
		1902 Ratings Personality Module

1904 Transducer Module	1905 Timing Position Sensor	1906 Water Temperature Sensor
1007 Engine Speed	1908 Electronic Governor	1909 Rack Solenoid
1907 Engine Speed Sensor		
1910 Timing Solenoid	1911 Rack Position	1912 Engine
	Sensor	Speed/Timing Sensor
1913 Throttle Speed	1914 Machine Speed	1915 Engine Speed
Sensor	Buffer	Control
1916 Crankcase Pressure Sensor	1917 Boost Pressure Sensor	1918 Throttle Lock Control
1919 Exhaust		1921 Inlet Air
	1920 Engine Software	
Temperature Sensor	Flashing	Temperature Sensor
1922 Fuel Temperature	1923 Atmospheric	1924 Engine Oil Pressure
Sensor	Pressure Sensor	Sensor
1925 Injection Actuation	1926 Customer	1927 Relay Electronic
Pressure Sensor	Communications Module (of the ECM System)	Control
1928 Atmospheric	1929 Engine Oil	192T Injection Actuator
Temperature Sensor	Temperature Sensor	Temperature Sensor
1931 Engine & Hydraulic	1940 Modulating Valve	1948 Dual Fuel Electronic
Pump Electronic Control		Control Unit
Module		
<b>&gt;</b>	II. TRANSMISSION OF POW	VER
Transmission & Drive Li	ne – of the 3000 Assembly,	EPP covers the following:
3001, 3002, 3003	3005 Drive	3011 Bevel and Transfer
Transmission, Torque	Train/Transmission Oil	Case
Converter, & Transfer	Filler	
Gears		
3013 Axle Arrangement	3015 Transmission & Axle	3016 Drive Train Oil Lines
3066 Drive Train Oil	301T Drive Train Oil	3020 Drive & Steering
Pump	Temperature Sensor	Axle
3024 Drive Train	3030 Transmission	3031 & 3032
Breather		Transmission, Transfer
		Gears, Retarder
Clutch & N	/anual Shift/Direct Drive Tra	
	3052 Flywheel Clutch	3053 Clutch Shaft
3054 Clutch Plate	3055 Power Takeoff	3056 Clutch Oil Pump
	Clutch	
3057 Clutch Booster	3058 Clutch Brake	3059 Clutch Control
	3061 Transmission Gears	3062 Transmission
		D D
		Reverse Box
3063 Transmission Shaft	3064 Transmission Case	3065 Transmission
3063 Transmission Shaft	3064 Transmission Case	
3063 Transmission Shaft 3066 Transmission Oil	3064 Transmission Case 3068 Transmission Oil	3065 Transmission
		3065 Transmission Control
3066 Transmission Oil	3068 Transmission Oil	3065 Transmission Control

3074 Transmission	3075 Transmission Output	3076 Throwout Bearing
Pressure Control Valve	Gears	
3077 Transmission Brake	3078 Transmission Speed Control Valve	3079 Shuttle Control
3082 Transmission	3083 Transmission	
Mount	Selector & Pressure	
ou	Control Valve	
	Control valve	
Torque Converter, Divid	er, Retarder – of the 3100 A following:	ssembly, EPP covers the
	3101 Torque Converter	3102 Torque Converter
	over resque convertes	Clutch
3103 Torque Converter	3104 Torque	3105 Torque Converter
Lines/Hoses	Converter/Transmission	Housing
2.1100/110000	Wiring Harness	i i odoli ig
3106 Torque Converter,	3107 Power Takeoff Drive	3108 Pump Drive
Transfer Gear, Retarder	3107 Tower Takeon Brive	3100 Tump blive
3109 Torque Converter &	3030 Torque Divider	3073 Torque Divider
Retarder	Transmission	Control Valve
3151 Torque Divider	3113 Torque Divider	3114 Torque Divider
Governor	3113 Torque Divider	Planetary Carrier
3115 Torque Converter	3031 Transfer Gears,	3117 Transfer Gears and
Scavenge Pump	Torque Divider, & Retarder	Retarder
3032 Torque Divider &	3120 Retarder	3121 Retarder Extended
Retarder	3120 Retaider	Braking Control
3122 Retarder Lines	3123 Retarder Control	3124 Lockup Clutch
3122 Retarder Eines	Valve	Pressure Control Valve
3125 Torque Converter &	3126 Retarder Selector	3127 Torque Converter
Divider	Valve	Bearing Retainer
3128 Torque Converter	3129 Torque Converter	3130 Torque
Flange	Stator	Divider/Torque Converter
i idilgo	Clater	Shaft
3131 Torque Converter	3132 High-Low Clutch	3133 Torque Converter
Turbine Wheel	Group	Relief Valve
3134 Torque Converter	3135 Torque Converter	3136 Torque Converter
Impeller	Carrier	Hub
3137 Torque Converter	3138 Torque Converter &	3139 Modulating Valve
Pressure/Sequence	Park Brake Release Pump	
Control Valve		
3140 Torque Converter	3141 Torque Converter	3142 Automatic Retarder
Control	Speed Sensor	Control
3143 Torque Converter	'	
Electronic Control		
	1	1
	Powershift Transmission	
3150 Power Shift	3151 Transmission	3066 Transmission Oil
Transmission	Governor	Pump
3154 Transmission	3155 Transmission	3156 Transmission
Lines/Hoses	Clutches	Control Linkage
		···· - · =··· ···-· <del>y •</del>

3157 Transmission Manual Selector Valve	3158 Transmission Auto	3159 Transfer Gear
	Selector Valve	Group
3160 Transmission	3162 Creeper Control	3163 Hydraulic Shift
Planetary	oroz orospor control	Cylinder
3068 Oil Filter Base	3166 Rotary Actuator	3167 Transmission
2000 0.1.1.1.1.0.1.2.000		Hydraulic Control
3168 Transmission	3169 Transmission Clutch	3170 Transmission Clutch
Electronic Control	Housing	Piston
(Includes Fingertip		
Controls)		
3171 Transmission	3172 Transmission Slave	3173 Transmission
Manual Switch	Switch	Synchronous Switch
3174 Transmission Shift	3175 Transmission Speed	3176 Transmission &
Solenoid	Sensor	Transfer Gears
3180 Transmission	3181 Transmission	3182 Transmission
Priority Valve	Neutralizer Control Valve	Lubrication Relief Valve
3183 Transmission	3184 Transmission Oil	3186 Transmission Planet
Control Lock	Cooler Bypass Valve	Carrier
3187 Transmission	3064 Transmission Case	3063 Transmission Shaft
Planet Carrier Thrust		
Disc/Plate		
3190 Transmission	3191 Transmission	3192 Transmission Dump
Clutch Plate	Neutralizer	Valve
3193 Drive Train High	3194 Transmission	
Speed Oil Change Group	Temperature Sensor	
· · · · · <del>· · · · · · · · · · · · · · </del>		
	sion - on hydraulic excavato	
	erential steering, including l	
hydrostatic drive or diffe	erential steering, including l the pump and motor	nydrostatic lines between
hydrostatic drive or diffe	erential steering, including l	
hydrostatic drive or diffe 3202 Hydraulic Flow Control	the pump and motor 3203 Drive Pump	3204 Charge Pump
hydrostatic drive or diffe	erential steering, including l the pump and motor	nydrostatic lines between
hydrostatic drive or diffe 3202 Hydraulic Flow Control 3205 Servo Control Valve	the pump and motor 3203 Drive Pump 3206 Manifold/Metering Valve	3204 Charge Pump  3207 Servo Cylinder
hydrostatic drive or diffe 3202 Hydraulic Flow Control	the pump and motor  3203 Drive Pump  3206 Manifold/Metering	3204 Charge Pump
hydrostatic drive or diffe 3202 Hydraulic Flow Control 3205 Servo Control Valve 3073 Hydrostatic Control	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control	3204 Charge Pump  3207 Servo Cylinder  3210 High Pressure
hydrostatic drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage	3204 Charge Pump 3207 Servo Cylinder 3210 High Pressure Relief Valve
hydrostatic drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic	3204 Charge Pump  3207 Servo Cylinder  3210 High Pressure Relief Valve  3213 Charge and Main
hydrostatic drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft	3204 Charge Pump  3207 Servo Cylinder  3210 High Pressure Relief Valve  3213 Charge and Main Relief Valve
hydrostatic drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control	3204 Charge Pump 3207 Servo Cylinder 3210 High Pressure Relief Valve 3213 Charge and Main Relief Valve 3216 Transmission
hydrostatic drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control	3204 Charge Pump  3207 Servo Cylinder  3210 High Pressure Relief Valve  3213 Charge and Main Relief Valve  3216 Transmission Underspeed/Overspeed
hydrostatic drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control Linkage	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
hydrostatic drive or differance 3202 Hydraulic Flow Control 3205 Servo Control Valve 3073 Hydrostatic Control Valve 3063 Hydrostatic Transmission Input Shaft 3214 Synchronizing Valve 3218 Hydrostatic Lines &	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control Linkage  3219 Hydrostatic Pilot Overspeed Valve	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 drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control Linkage  3219 Hydrostatic Pilot Overspeed Valve  3222 Hydrostatic Pump	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  3223 Transmission
hydrostatic drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control Linkage  3219 Hydrostatic Pilot Overspeed Valve	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  3223 Transmission Underspeed/Override
hydrostatic drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control Linkage  3219 Hydrostatic Pilot Overspeed Valve  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  3223 Transmission
hydrostatic drive or differance 3202 Hydraulic Flow Control 3205 Servo Control Valve 3073 Hydrostatic Control Valve 3063 Hydrostatic Transmission Input Shaft 3214 Synchronizing Valve  3218 Hydrostatic Lines & Hoses  3221 Hydrostatic Power Case  3225 Travel Electronic	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control Linkage  3219 Hydrostatic Pilot Overspeed Valve  3222 Hydrostatic Pump	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  3223 Transmission Underspeed/Override
hydrostatic drive or difference of the second of the secon	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control Linkage  3219 Hydrostatic Pilot Overspeed Valve  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  3223 Transmission Underspeed/Override
hydrostatic drive or differance 3202 Hydraulic Flow Control 3205 Servo Control Valve 3073 Hydrostatic Control Valve 3063 Hydrostatic Transmission Input Shaft 3214 Synchronizing Valve  3218 Hydrostatic Lines & Hoses  3221 Hydrostatic Power Case  3225 Travel Electronic	the pump and motor  3203 Drive Pump  3206 Manifold/Metering Valve  3209 Hydrostatic Control Linkage  3063 Hydrostatic Transmission Output Shaft  3215 Power Unit Control Linkage  3219 Hydrostatic Pilot Overspeed Valve  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  3223 Transmission Underspeed/Override

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	3263 Limited Slip
	Differential	Differential
3264 Differential Lock	3265 No-Spin Differential	3266 Differential Lock Cylinder
3267 Drive Shaft Support	3268 Axle Housing	3269 Pinion Housing
	Support/Trunnion	
3270 Locking Differential	3271 Transaxle	3272 Differential Lock
		Control Valve
3273 Differential Lock	3274 Constant Velocity	3275 Drive Line Brake
Actuator Valve	Universal Joint	(see exclusions listed
		under Braking System
		section)
3276 Drive Line Brake	3277 Drive Line Brake	3278 Drive Axle
Disc (see exclusions	Lining (see exclusions	
listed under Braking	listed under Braking	
System section)	System section)	
3279 Engine Output	3281 Bevel Gear Case	3283 Differential Case
Drive Assembly/Coupling		
3284 Differential Carrier	3287 Interaxle Differential	3288 Anti-Spin Control
3290 Differential	3291 Drive Axle Oil Pump	3292 Differential Lock
Temperature Sensor		Pump
Countershaft Transi	mission – of the 3400 Asser following:	nbly, EPP covers the
	3064 Countershaft	3066 Countershaft Oil
	Transmission Case	Pump
3403 Countershaft	3155 Countershaft	3169 Countershaft Clutch
Lines/Hoses	Clutches	Housing
3170 Countershaft Clutch	3159 Countershaft	3063 Countershaft Shaft
Piston	Transfer Gear	
3075 Countershaft	3077 Countershaft Brake	3074 Countershaft
Output Gears		Pressure Control Valve
3413 Countershaft	3414 Countershaft	3416 Countershaft
Transmission Control	Transmission	Transmission Pneumatic
Linkage	Ratio/Directional Selector	Control
3167 Hydrostatic Control	3168 Electrical Control	
Groups	Groups	
	•	
	Drive Train	
4001 Final Drive & Brake	4003 Final Drive, Steering	4004 Brake & Axle
Wheel (see exclusions	Clutch, & Brake	
listed under Braking	·	
System section)		
	•	•

	1	T .
4005 Steering & Braking	4006 Wheel & Brake	4007 Steering & Brake
System	Assembly	Pump
4008 Final Drive, Brake &	4009 Final Drive, Brake &	4010 Final Drive, Brake &
Wheel Pump	Differential Steering	Differential Steering Drive
·	Planetary	
4011 Final Drive & Brake		
		L
	Final Drive	
4050 Final Drive &	4051 Final Drive & Wheel	4052 Final Drive Seal
Torque Hub	4001 I mai Brive a vincer	4002 i mai brive dear
4053 Drive Axle	4054 Final Drive Hub	4055 Final Drive Gears
Hub/Gear Assembly	4054 I IIIai Diive Hub	4000 i iliai Dilve Geals
4056 Final Drive Shaft	4057 Final Drive Pinion	4050 Caracket Cheft/Dara
4056 Final Drive Shall		4058 Sprocket Shaft/Bore
1050 5: 15:	Flange	1001 5: 10: 0.1:
4059 Final Drive	4060 Final Drive Oil Pump	4061 Final Drive Parking
Case/Bore		Brake
4062 Tandem Drive	4063 Tandem/Single Drive	4064 Tandem Drive
	Chain	Housing
4066 Final Drive Outer	4068 Tandem Drive Stub	4069 Final Drive Chain
Bearing Support	Axle	
4072 Tandem Drive	4073 Tandem Drive Driven	4074 Final Drive - Outer
Sprocket	Sprocket	Section
4075 Final Drive - Inner	4076 Tandem Drive, Bevel	4084 Final Drive Planet
Section	Gear, & Final Drive	Carrier Hub/Ring Gear
4091 Final Drive Pinion	4092 Planetary Final Drive	4093 Final Drive Planet
	Carrier	Carrier Thrust Surface
4094 Final Drive Pinion &		
Flange		
	,	
Steering Clutch & Bra	ke Machines – Components	on track-type equipment
	I. Of the 4100 Assembly, EP	
omy, ii do oquippod		<del></del>
	4101 Steering Clutch	4102 Steering Clutch
		Control Valve
4103 Steering Clutch	4104 Steering Clutch &	4105 Steering Clutch
Control Pump	Brake Control Lines	Booster
4106 Steering Clutch	4108 Steering Clutch	4110 Brake Band
Control	Relief Valve	
4111 Track Brake Control	4112 Track Brake Control	4113 Track Brake Drum
Valve	Valve	
4114 Track Brake	4115 Brake Actuating	4116 Brake Hand Pump
Booster	Mechanism	o z.ako riana ramp
4117 Steering Clutch	4118 Steering Clutch	4119 Steering
Case	Release Piston	Clutch/Bevel Gear &
	Trelease i Istoli	Shaft
4120 Stooring Clutch 9	4121 Proke Lubrication	
4120 Steering Clutch & Brake Control Valve	4121 Brake Lubrication Relief Valve	4122 Steering Clutch &
Diake Contion valve	INCHEL VAIVE	Brake Linkage (see
		exclusions listed under
		Braking System section)

4123 Steering Clutch Hub			
_	Bevel Gear Shaft, & Pinion		
·			
Differential Steer Machines			
4129 Differential Steering	4130 Differential Steering	4131 Differential Drive &	
_	Planetary	Brake	
4132 Planetary & Brake	4133 Steering & Brake	4135 Differential Steering	
	Lines	& 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	4252 Brake Drum	4253 Brake Shoes
Assembly – Excluding	Assembly – Excluding	Assembly – Excluding
wear items. See	wear items. See	wear items. See
clarifications above.	clarifications above.	clarifications above.
4254 Brake Lining	4255 Brake Disc Assembly	4256 Brake Caliper/Head
Assembly – Excluding	<ul> <li>Excluding wear items.</li> </ul>	Assembly – Excluding
wear items. See	See clarifications above.	wear items. See
clarifications above.		clarifications above.
4257 Brake Lines	4258 Brake Master	4259 Hydrovac
	Cylinder	
4260 Wheel Cylinder	4261 Brake/Slack Adjuster	4262 Brake Actuator
4263 Brake Accumulator	4264 Brake Accumulator	4265 Service Brake
	Charging Valve	Control Valve
4266 Brake Booster	4267 Parking Brake	4268 Brake Pump
4269 Service Brake	4270 Brake Expander	4271 Selector Brake
Control	Tube	Valve
4272 Brake Air Tank	4273 Friction Pad Assembly	4274 Brake Control
	(Excluding wear items. See	Neutralizer Valve
	Clarifications Above.)	
4275 Brake Return	4277 Brake Air Over	4280 Brake Air Relay
Check Valve	Cylinder	Valve
4281 Brake Air Check	4283 Quick Release Valve	4284 Parking Brake
Valve		Control

4288 Interver Valve	4285 Air Dryer	4286 Brake System Diverter Valve	4287 Vacuum Pump	
429T Brake/Axle Oil Tenperature Sensor Control Valve Reservoir Reservoir A293 Accumulator Bleed A294 Automatic Electronic Reservoir A293 Accumulator Bleed A294 Automatic Electronic Pressure Switch Pressure Switch Pressure Switch	4288 Interver Valve			
Temperature Sensor	429T Brake/Axle Oil	4290 Treadle Brake		
4293 Accumulator Bleed Valve			l ,	
Steering System (Hydrostatic & Diff-Steer)				
Steering System (Hydrostatic & Diff-Steer)  4304 Steering Lines/Hoses  4305 Steer Linkage  4306 Steering Pump  4310 Steering Metering Pump  4311 Steering Axle  4312 Steering Metering Pump  4313 Steering Relief Pump  4314 Steering Cooler Pump  4344 Steering Cooler Pump  4345 Steering Pilot Valve  4347 All Wheel Steer Valve  Hydrostatic Drive - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor  4350 Hydrostatic Drive Propel/Drive Motor  4351 Hydraulic Propel/Drive Motor  4353 Hydrostatic Drive Parking Brake 4356 Brake & Shift Valve   Electric Power Generator  4468 Series Boost  4470 Exciter Field  4471 Generator Bearing  4473 Rectifier Module  4474 Regulator Module  4475 Voltage Regulator Assembly/Tray  4468 Current Transformer  4470 Exciter Field  4471 Generator Bearing  4476 Current Transformer  4481 Permanent Magnet Pilot Exciter  Drive Train Electronic Control  4801 Traction Control System  4803 Wheel Speed Sensor Solenoid Valve  4805 On/Off Pilot Solenoid Valve  4808 Drive Train  4810 All Wheel Drive Electroic Control  4811 Electronic Traction  4812 Drive Train  4815 Drive Control  4815 Drive Control  4816 Drive Train  4816 Steering Pump  4313 Steering Axle  4322 Steering Pump  4322 Steering Relief Valve  4343 Steering Axle  4344 All Wheel Steer  4354 Parke Release Pump  4355 Hydrostatic Drive  Gear Reducer  4467 Voltage Regulator  4467 Voltage Regulator  4468 Voltage Regulator  4475 Voltage Droop  4476 Current  4477 Excitation  4480 Programmable Logic  Controller  4480 Hydrostatic  4480 Brake Proportional  4480 Brake Proportional  4480 Brake Pressing  4480 All Wheel Drive  Electronic Control  4801 All Wheel Drive  Electronic Control  4802 Drive Train  4803 Drive Train  4804 Brake Proportional  4805 Drive Train  4806 Arti				
4304 Steering   4305 Steer Linkage   4306 Steering Pump				
4304 Steering   4305 Steer Linkage   4306 Steering Pump	Steerin	g System (Hydrostatic & Di	ff-Steer)	
Lines/Hoses 4307 Steering Valve 4312 Steering Metering Pump 4318 Tie Rod 4320 Steering Flow Divider Valve 4341 Steering Cooler Pump 4344 Steering Cooler Pump 4344 Steering Charge Pump 4344 Steering Charge Pump 4346 Steering Oil Cooler 4347 All Wheel Steer Pump 4350 Hydrostatic Drive - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor 4350 Hydrostatic Drive 4351 Hydraulic Propel/Drive Motor 4353 Hydrostatic Drive Parking Brake 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 4477 Excitation 4478 Current 4478 Current 4477 Excitation 4480 Uninterruptable Power Supply 4801 Traction Control 4803 Wheel Speed Sensor 4804 Brake Proportional Solenoid Valve 4805 On/Off Pilot 4806 Articulation Angle Position Sensor Electronic Control 4810 Brake Pressing Reducing Valve 4808 Drive Train 4811 Electronic Traction 4812 Drive Train 4815 Drive Control				
Pump   4320 Steering Flow   Valve	_		3 1	
Divider Valve   Valve			4313 Steering Axle	
Divider Valve 4341 Steering Cooler Pump 4342 Steering Pilot Valve 4343 Steering Control Pump 4344 Steering Charge Pump 4346 Steering Oil Cooler Valve Valve Valve  Hydrostatic Drive - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor  4350 Hydrostatic Drive 4351 Hydraulic Propel/Drive Motor 4353 Hydrostatic Drive Parking Brake 4356 Brake & Shift Valve 4354 Brake Release Pump 4355 Hydrostatic Drive Gear Reducer 4356 Brake & Shift Valve 5  Electric Power Generator 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 449C Programmable Logic Controller 5  Drive Train Electronic Control 4803 Wheel Speed Sensor 4804 Brake Proportional Solenoid Valve 4808 Drive Train 4809 Brake Position Sensor Reducing Valve 4810 All Wheel Drive Electronic Control 4811 Electronic Traction 4812 Drive Train 4815 Drive Control 4815 Drive Control 4815 Drive Control	4318 Tie Rod	4320 Steering Flow	4322 Steering Relief	
Pump 4344 Steering Charge Pump  Hydrostatic Drive - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor  4350 Hydrostatic Drive 4351 Hydraulic Propel/Drive Motor 4353 Hydrostatic Drive Parking Brake 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 Current Transformer 4481 Permanent Magnet Pilot Exciter  Drive Train Electronic Control 4801 Traction Control System 4808 Drive Train Electronic Control 4809 Brake Position Electronic Control Electronic Control Electronic Control Sensor Electronic Control Electronic Co			ı	
Pump   Valve   Valve   Phydrostatic Drive - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor   4350 Hydrostatic Drive   4351 Hydraulic   Propel/Drive Motor   4352 Drive Control Valve   Propel/Drive Motor   4353 Hydrostatic Drive   4354 Brake Release Pump   4355 Hydrostatic Drive   Gear Reducer   4356 Brake & Shift Valve	_	4342 Steering Pilot Valve	4343 Steering Control	
Pump   Valve   Valve   Phydrostatic Drive - on hydraulic excavators and equipment with hydrostatic drive or differential steering, including hydrostatic lines between the pump and motor   4350 Hydrostatic Drive   4351 Hydraulic   Propel/Drive Motor   4352 Drive Control Valve   Propel/Drive Motor   4353 Hydrostatic Drive   4354 Brake Release Pump   4355 Hydrostatic Drive   Gear Reducer   4356 Brake & Shift Valve	4344 Steering Charge	4346 Steering Oil Cooler	4347 All Wheel Steer	
drive or differential steering, including hydrostatic lines between the pump and motor  4350 Hydrostatic Drive			Valve	
drive or differential steering, including hydrostatic lines between the pump and motor  4350 Hydrostatic Drive	·			
Propel/Drive Motor  4353 Hydrostatic Drive Parking Brake  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  Power Supply   Drive Train Electronic Control  4801 Traction Control System  4804 Brake Proportional Solenoid Valve  4805 On/Off Pilot 4806 Articulation Angle Position Sensor Reducing Valve  4807 Brake Pressing Reducing Valve  4808 Drive Train 4809 Brake Position Sensor Electronic Control  4811 Electronic Traction 4812 Drive Train 4815 Drive Control		drive or differential steering, including hydrostatic lines between the pump		
Parking Brake 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  Drive Train Electronic Control  4801 Traction Control System 4805 On/Off Pilot 4806 Articulation Angle Position Sensor 4808 Drive Train 4809 Brake Position Electronic Control 4811 Electronic Traction 4812 Drive Train 4815 Drive Control	4350 Hydrostatic Drive		4352 Drive Control Valve	
Electric Power Generator  4458 Brushes	4353 Hydrostatic Drive		4355 Hydrostatic Drive	
Electric Power Generator  4458 Brushes	Parking Brake		Gear Reducer	
Electric Power Generator  4458 Brushes	4356 Brake & Shift Valve			
4458 Brushes4466 Surge Suppressor4467 Voltage Regulator Assembly/Tray4468 Series Boost4470 Exciter Field4471 Generator Bearing4473 Rectifier Module4474 Regulator Module4475 Voltage Droop Transformer4476 Current Transformer4477 Excitation Transformer4480 Uninterruptable Power Supply4481 Permanent Magnet Pilot Exciter449C Programmable Logic ControllerDrive Train Electronic Control4801 Traction Control System4803 Wheel Speed Sensor Solenoid Valve4805 On/Off Pilot Solenoid Valve4806 Articulation Angle Position Sensor4807 Brake Pressing Reducing Valve4808 Drive Train Electronic Control Module Sensor4810 All Wheel Drive Electronic Control4811 Electronic Traction4812 Drive Train4815 Drive Control				
4468 Series Boost 4470 Exciter Field 4471 Generator Bearing 4473 Rectifier Module 4474 Regulator Module 4475 Voltage Droop Transformer 4476 Current 4477 Excitation 4480 Uninterruptable Transformer Power Supply 4481 Permanent Magnet Pilot Exciter   Drive Train Electronic Control  4801 Traction Control 4803 Wheel Speed Sensor Solenoid Valve 4805 On/Off Pilot 4806 Articulation Angle Solenoid Valve Position Sensor Reducing Valve 4808 Drive Train 4809 Brake Position 4810 All Wheel Drive Electronic Control 4811 Electronic Traction 4812 Drive Train 4815 Drive Control		<b>Electric Power Generator</b>		
4468 Series Boost 4470 Exciter Field 4471 Generator Bearing 4473 Rectifier Module 4474 Regulator Module 4475 Voltage Droop Transformer 4476 Current 4477 Excitation 4480 Uninterruptable Transformer Power Supply 4481 Permanent Magnet Pilot Exciter   Drive Train Electronic Control  4801 Traction Control 4803 Wheel Speed Sensor Solenoid Valve 4805 On/Off Pilot 4806 Articulation Angle Solenoid Valve Position Sensor Reducing Valve 4808 Drive Train 4809 Brake Position 4810 All Wheel Drive Electronic Control 4811 Electronic Traction 4812 Drive Train 4815 Drive Control	4458 Brushes	4466 Surge Suppressor	4467 Voltage Regulator	
4473 Rectifier Module  4474 Regulator Module  4475 Voltage Droop Transformer  4476 Current 4477 Excitation 4480 Uninterruptable Power Supply  4481 Permanent Magnet Pilot Exciter   Drive Train Electronic Control  4801 Traction Control 4803 Wheel Speed Sensor 4804 Brake Proportional System  4805 On/Off Pilot 4806 Articulation Angle Solenoid Valve  4808 Drive Train 4809 Brake Position Electronic Control 4811 Electronic Traction 4812 Drive Train 4815 Drive Control				
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Transformer  4476 Current Transformer  4477 Excitation Transformer  4480 Uninterruptable Power Supply  4481 Permanent Magnet Pilot Exciter  Drive Train Electronic Control  4801 Traction Control System  4803 Wheel Speed Sensor Solenoid Valve  4805 On/Off Pilot Solenoid Valve Position Sensor  4808 Drive Train  4809 Brake Position Sensor Electronic Control  4810 All Wheel Drive Electronic Control  4811 Electronic Traction  4812 Drive Train  4815 Drive Control		4474 Regulator Module	<del> </del>	
4476 Current Transformer4477 Excitation Transformer4480 Uninterruptable Power Supply4481 Permanent Magnet Pilot Exciter449C Programmable Logic ControllerDrive Train Electronic Control4801 Traction Control System4803 Wheel Speed Sensor Solenoid Valve4805 On/Off Pilot Solenoid Valve4806 Articulation Angle Position Sensor4807 Brake Pressing Reducing Valve4808 Drive Train Electronic Control Module 4811 Electronic Traction4810 All Wheel Drive Electronic Control 4815 Drive Control		Ĭ		
Transformer Transformer Power Supply  4481 Permanent Magnet Pilot Exciter  Drive Train Electronic Control  4801 Traction Control  System  4805 On/Off Pilot Solenoid Valve  4806 Articulation Angle Solenoid Valve  4808 Drive Train 4809 Brake Position Electronic Control  4810 All Wheel Drive Electronic Control 4811 Electronic Traction 4812 Drive Train 4815 Drive Control	4476 Current	4477 Excitation		
Pilot Exciter  Drive Train Electronic Control  4801 Traction Control  4803 Wheel Speed Sensor  4804 Brake Proportional System  4805 On/Off Pilot  4806 Articulation Angle Solenoid Valve  4807 Brake Pressing Position Sensor  4808 Drive Train 4809 Brake Position Electronic Control Module 4811 Electronic Traction 4812 Drive Train 4815 Drive Control	Transformer	Transformer	•	
Pilot Exciter  Drive Train Electronic Control  4801 Traction Control  4803 Wheel Speed Sensor  4804 Brake Proportional System  4805 On/Off Pilot  4806 Articulation Angle Solenoid Valve  4807 Brake Pressing Position Sensor  4808 Drive Train 4809 Brake Position Electronic Control Module 4811 Electronic Traction 4812 Drive Train 4815 Drive Control			117	
Drive Train Electronic Control  4801 Traction Control System  4803 Wheel Speed Sensor Solenoid Valve  4805 On/Off Pilot Solenoid Valve  4806 Articulation Angle Position Sensor Reducing Valve  4808 Drive Train Electronic Control Module Sensor Electronic Control  4811 Electronic Traction  4812 Drive Train  4805 Ontrol  4804 Brake Proportional Solenoid Valve  4807 Brake Pressing Reducing Valve Electronic Control  4810 All Wheel Drive Electronic Control  4815 Drive Control				
4801 Traction Control System4803 Wheel Speed Sensor Solenoid Valve4804 Brake Proportional Solenoid Valve4805 On/Off Pilot Solenoid Valve4806 Articulation Angle Position Sensor4807 Brake Pressing Reducing Valve4808 Drive Train Electronic Control Module4809 Brake Position Sensor4810 All Wheel Drive Electronic Control4811 Electronic Traction4812 Drive Train4815 Drive Control				
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System  4805 On/Off Pilot Solenoid Valve  4806 Articulation Angle Position Sensor  4807 Brake Pressing Reducing Valve  4808 Drive Train 4809 Brake Position Electronic Control Module Sensor  4811 Electronic Traction 4812 Drive Train 4815 Drive Control			T	
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Solenoid ValvePosition SensorReducing Valve4808 Drive Train4809 Brake Position4810 All Wheel DriveElectronic Control ModuleSensorElectronic Control4811 Electronic Traction4812 Drive Train4815 Drive Control		4806 Articulation Angle		
4808 Drive Train4809 Brake Position4810 All Wheel DriveElectronic Control ModuleSensorElectronic Control4811 Electronic Traction4812 Drive Train4815 Drive Control				
Electronic Control ModuleSensorElectronic Control4811 Electronic Traction4812 Drive Train4815 Drive Control			_	
4811 Electronic Traction 4812 Drive Train 4815 Drive Control				
			<del> </del>	
	Control	Electronic Control	Manual Override	

4820 Drive Train	4823 Electronic Current	4824 Solenoid Driver
Software	Sensor	
	Hydraulic System	
5055 Van Pump	5058 Hydraulic Motor, Piston-Type (Associated Only with Hydrostatic Transmission or Differential Steer)	5059 Pilot 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	5512 Air Pressure Switch	5513 Air Ratio Valve
Electronic Control	00127 m 1 10000 10 0 mmon	
	Gauges & Indicators	
7498 Thermocouple		
En	gino Electronio Control Svo	tom
191N Nitrogen Oxide	gine Electronic Control Sys 191W Jacket Water Outlet	
Sensor	Pressure Sensor	
	,	
	Paving Equipment only:	
5630 Rotor Axle	ed are belts, chains and rot 5631 Rotor Drive	or brakes 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 Construction	Equipment (CCE) Powertrai	n (MTI /CTI /MHFY) 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		
000.01		
	Electric Drive Powertrain	
Note: Belts	, chains and rotor brakes a	re excluded.
1410 Voltage Reg	1421 DC To DC Converter	1437 Electrical System
		Resistor
1603 Traction Drive	1607 Drive System	1617 Drive System
Motor	Contactor	Thyristor/Transistor
1618 Drive System	1619 Drive System	1627 Drive System
Rectifier/Diode	Capacitor	Resistor
1633 Drive system Power	1636 Drive Motor Fan	3121 Retarder Extended
Cable		Braking Control
3225 Travel Electronic	3279 Engine Output Drive	4018 Propulsion Module
Control		
425R Electric Retarder Group	4450 Generator	4453 Stator
4454 Excitor/Arm	4456 Generator Drive	4457 Rotor
	Coupling	
4459 Cable or Wire	445B Bus Bar	4465 Rotating Rectifier Diode
4802 TCS Electro Control	4822 Inverter	7611 Optical Interface
		Control Module
Sp	ecial Service Claim Catego	ries
7729 HEUI Actuation		
	<b>Emissions Module</b>	
	nponents are included only	
	t of the Caterpillar Clean Er	
1061 Exhaust Piping	1071 Air Lines/Pipe	108A Solenoid Valve
108B Combustion Body		
100E Discal Darticulate	Cooler	Combustion Lines
108F Diesel Particulate	108G Exhaust Cooler	108H Diesel Exhaust
Filter (DPF) 108I Diesel Exhaust Fluid	108J Diesel Exhaust Fluid	Fluid Module  108L Boost Pressure Line
Injector	Pump	TOOL BOOST Pressure Line
108N Clean Gas	1080 Exhaust Gas	108P Exhaust Back
Induction Valve	Recirculation High	Pressure Valve
Induction valve	Temperature Cooler Core	Fiessure valve
108Q Exhaust Gas	108R NOX Reduction	108S Combustion Air
Recirculation Low	System Air Inlet	System
Temperature Cooler Core		
108T Diesel Exhaust	108V Venturi	108M Exhaust
Fluid Tank		Combustion Manifold
1091 Catalytic Converter	1274 Fuel Supply/Return	1335 Particle Sensor
	Line	
1380 Coolant Lines (of	Line 1408 Wiring Harness -	1554 Coil
1380 Coolant Lines (of the Emissions Module	Line 1408 Wiring Harness - included in Powertrain	1554 Coil
1380 Coolant Lines (of the Emissions Module related to DEF)	1408 Wiring Harness -	1554 Coil

	Caterpillar Clean		
	Emissions Module (CEM.)		
1702 Fuel Manifold	3206 Manifold/Metering Valve	4493 Relay (of the Emissions Module related to DEF)	
5506 Air Control Valve			
Other Implements & Machine Components			
7063 Swing Gear/Bearing			
Rail/Road Wheeled Excavator only:			
4321 Steering Knuckle	5713 Electric Hydraulic		
	Pump		

**Hydraulic Coverage:** 

Lubrication System		
1306 Hydraulic Oil Base		
,		
	Cooling System	
1374 Hydraulic Oil		
Cooler		
	Transmission and Drive Li	ne
3016 Drive Train Oil	3154 Transmission Oil	
Lines	Lines	
	Steering System	
4303 Steering Cylinder	4304 Steering Lines or	4306 Steering Pump
	Hoses	
4307 Steering Valve	4311 Steering Booster	4312 Steering Metering
		Pump
4315 Servo Steering	4317 Steering Gear &	4320 Steering Flow
Cylinder	Valve	Divider Valve
4322 Steering Relief	4324 Secondary Steering	4330 Steering Neutralizer
Valve	Pump	Valve
4331 Steering	4332 Steering Hydraulic Tank	4337 Steering Pressure
Accumulator		Reducing Valve
4339 Secondary Steering Diverter Valve	4340 Steering Counterbalance Valve	4341 Steering Cooler Pump
4342 Steering Pilot Valve	4343 Steering Control	4344 Steering Charge
4342 Steering Filot valve	4343 Steering Control	Pump
4346 Steering Oil Cooler	4347 All Wheel Steer	4349 Steering Selector &
	Valve	Pressure Control Valve
	74.70	1 1000dio Control Valvo
Hydraulic System		
5051 Hydraulic Control	5052 Hydraulic Motor -	5054 External Control
Valve	Vane Type	Valve
5055 Hydraulic Pump -	5056 Hydraulic Tank	5057 Hydraulic Hoses or
Vane Type		Lines (Hydraulic Hoses

	1	
		excluded for the 6000
		series Hydraulic Mining
		Shovels)
5058 Hydraulic Motor -	5059 Pilot Control Valve	505C Piston Cylinder
Piston Type		
505Q Quick Release	505U Unloading Valve	5060 Swivel
Valve		
5061 Hydraulic Motor -	5063 Implement Control	5064 Combination Valve
Gear Type		
5065 Selector Valve	5066 Diverter Valve	5067 Check Valve
5069 Main System Relief	506G Gear Pump & Motor	506P Implement Priority
Valve		Valve
5070 Hydraulic Pump -	5071 Hydraulic Oil Cooler	5072 Pilot System Relief
Piston Type	Bypass Valve	Valve
5073 Hydraulic Pump -	5074 Thermal Bypass	5076 Hydraulic Tank
Gear Type	Valve	Valve
5077 Hydraulic	5078 Hydraulic Actuator	5079 Shuttle Valve
Accumulator (excluded		
for the 6000 series		
Hydraulic Mining		
Shovels)		
507G Piston & Gear	507V Piston & Vane Pump	5080 Make-Up Valve
Pump		
5081 Hydraulic	5082 Gerotor Motor	5083 Hydraulic Hoist
Accumulator Charging		Pump
Valve		
5084 Implement Pump	5085 Pilot Pump	5086 Pressure & Flow
_		Compensator Valve
5087 Cooling & Test	5088 Pilot Test Valve	5089 Blocker Valve
Manifold		
5090 Line Make-Up	5093 Hydraulic Filter By-	5097 Hydraulic Flow
Valve	Pass Valve	Divider Valve
509T Hydraulic Oil		
Temperature Sensor		
	Lift, Tilt, Tip Controls	I = 4 = 4 = 11
5101 Angling Cylinder	5102 Lift or Hoist Cylinder	5104 Tilt Cylinder
5105 Swing Cylinder	5106 Tip Cylinder	5107 Tailgate Cylinder
5108 Side Dump	5109 Lift Kickout Control	5110 Quick Drop Valve
Cylinder		
5111 Crossover Valve	5112 Bucket Positioner	5115 Bulldozer Control
	Control	Valve
5117 Pressure	5118 Vent Valve	5119 Float Selector Valve
Control/Relief Valve		
5120 Pump Selector	5122 Bucket Control Valve	5123 Tilt Control Valve
Valve		
5124 Loader Control	5125 Tilt Pilot Valve	5126 Lift Pilot Valve
Valve		
5127 Cylinder Check	5128 Over-Center Valve	5129 Restrictor Valve
Valve		

5130 Lock Valve	5132 Hydraulic Position Sensor	5133 Coupler Cylinder – Note: Quick Coupler (6129) not included. Note: Coupler Cylinder must be factory consist & first mount to receive
5134 Kickout Valve	5136 Lift/Hoist Control	coverage. 5137 Flow Control Valve
o ro i ruonour vaivo	Valve	order from definition 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	5146 Dump Cylinder	5147 Lowering Control
Cylinder		Valve
5148 Multipurpose Bucket Control Valve		
	Cat Skidder only - Controls	s
5164 Winch Hydraulic Pump	5179 Winch Hoses/Lines	
October		Operational
	tor Grader only - Implement	
5201 Power Control Box	5206 Circle Drive Motor 5214 Scarifier Valve	5211 Wheel Lean Cylinder 5216 Automatic Blade
5213 Scarifier Cylinder	5214 Scarmer valve	Control
5220 Centershift Lock	5223 Centershift Cylinder	5226 Leaning Wheel
Control Valve	3223 Gentershirt Gyimaen	Control Valve
5227 Blade Sideshift	5229 Blade Sideshift	5235 Lock Check Valve
Control	Cylinder	See Esta Chiesa vans
5236 Power Control Pump	5261 Servo Valve	5264 Hydraulic Manifold
5265 Articulation Cylinder	5266 Articulation Valve	
	Cat Scraper only - Control	s
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	5311 Traction Control	5312 Leveling Valve
Cylinder	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
5322 Ejector Check Valve	5323 Push-Pull Pump	5325 Speed Control Valve

Ripper, Tool Bar & Other Implement Controls			
5351 Ripper Control Valve	5352 Ripper Lift Cylinder	5353 Ripper Pin Puller Control Valve	
5354 Ripper Pin Puller Cylinder	5355 Tool Bar Cylinder	5356 Ripper Tilt Cylinder	
5357 Ripper Control			
	noe, Front Shovel & Other In		
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 Cylinder	5458 Stick Cylinder	5459 Swing Drive	
5461 Boom Control	5462 Speed & Direction	5463 Offset Cylinder	
Valve	Pilot Control Valve	,	
5464 Stick Control Valve	5465 Stick & Swing Pilot Control Valve	5466 Boom & Attachment Pilot Control 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	5564 Grapple Cylinder	5565 Grapple/Delimb Arm	
Change Valve	Check Valve	Pilot Valve	
5567 Logger Head	5568 Grapple Control	5570 Grapple Hydraulic	
Positioner Master	Valve	Control	
Cylinder			
5571 Solenoid & Relief	5572 Feed Roller Arm	5573 Holding Arm	
Valve	Cylinder	Cylinder	
5574 Measuring Sensor	5575 Saw Motor	5576 Gate Cylinder	
	mplement Electronic Contro		
5701 ECM (of the	5702 Implement Hydraulic	5705 Joystick (of the	
Implement Electronic	Electronic Control	Implement Electronic	
Controls system only)		Control system only)	
5721 Potentiometer	5736 Linkage Position	5737 Control Lever	
5740 1	Sensor	Position Sensor	
5740 Implement			
Software & Hydraulic			
Software flashing			
	Matarial Handler and Contro	-1-	
	Material Handler only Control		
5802 Full Free Lift Cylinder	5803 Full Free Triple Lift Cylinder	5809 Sideshift Valve	
5811 Load Control Valve	5812 Full Free Triple Lift	5813 Full Free Triple Lift	
COTT LOCA CONTROL VAIVE	Primary Cylinder	Second Cylinder	
5814 Full Free	5815 Slew Cylinder	5822 Twist Lock Cylinder	
Quadruple Lift Cylinder			
	1	,	
	Other Controls		
5804 Side Shift Cylinder	5807 Fork Positioner	5816 Compensating	
	Cylinder	Cylinder	
5823 Fork Leveling	5904 Auger Drive		
Cylinder			
Other I	mplements & Machine Com		
	7078 Frame Level Cylinder	7080 Oscillation Lock	
		Cylinder	
6000 Series Hydraulic Mining Shovel only Components			
4265 Service Brake	508A Auxiliary Pilot Pump	508C Hydraulic Cooling	
Control Valve	7000 0 1 0 0 1	Pump	
79C3 Propel Brake	79PA Swing Drive Motor		
D-	I/Deed Wheeled Treesers		
	il/Road Wheeled Excavator		
1130 Valve Actuator	7562 Hydraulic Cylinders	5116 Attachment Cylinder	
5140 Rogio Lift Cylindor	5362 Work Tool Cylindor		
5149 Bogie Lift Cylinder	5362 Work Tool Cylinder		

### **Technology Coverage:**

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

(Compactometer)

Way Radio)

Control

#### **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
- Service Letters on machines covered by New Machine EPP: EPP only applies to the customer participation portion of the after-failure Product Support Programs (PSP) that exceeds the Service Letter limit. Contact your dealer for additional information.

## 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 also 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 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 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

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

- 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

The following are components commonly mistaken as covered Technology Components.

#### The following components are excluded:

- 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