

# LARGE MOTOR GRADER

# UPGRADE KITS

14M 14M3 14 16M 16M3 16 18M3 18 18 24M 24

Circle Saver	Front Axle Guards	Steering Cylinder Update	Engine Compression Brake	Stroke-Limiting Collars	Advanced Control Joysticks	LL Circle-Drawbar Wear Strips	Long-Life Blade Rail Wear Strips	Long-life Tip Bearings	Greasable Blade Tip Pin Assembly	LL Lift & Center Shift Cyl Inserts	Moldboard Wear Plates	CapSure Ripper Tips & Shanks	Next-Gen Filters	Gen 2 Steering Upgrade	Front Frame Doubler Plate	Front Frame Fish Plate	Plate Addition to Drawbar	Torsional Coupler Update	Thrust Washer Update	Tie Rod Update	Tire Monitoring System	Driveline Upgrade Kit	Mesabi Radiator Upgrade Kit	Powered Arm Pods	Hydraulic Fluid Monitoring		
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### **CIRCLE SAVER**

#### FEATURE

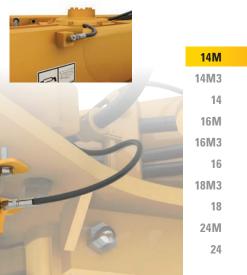
+ Simple pinion gear lube system

#### BENEFIT

- + Lube the pinion gear without climbing under the machine
- + Lube process is faster, safer, and cleaner
- + Extends component life

#### REFERENCE

- + Special Instruction Media Number M0073634-01
- + Parts Kit 488-2192



### FRONT AXLE GUARDS

#### FEATURE

+ Front axle skid plates and cylinder guards

#### BENEFIT

- + Improved cylinder protection
- + Hose routings protected from external debris

#### REFERENCE

16H & 16M:

- + Special Instruction Media Number REHS9817-00
- + Parts Kit 475-7639
- 16, 16M3, 18 & 18M3:
  - + Parts Kit 480-6660

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### FRONT AXLE GUARDS

#### FEATURE

+ Front axle skid plates and cylinder guards

#### BENEFIT

- + Improved cylinder protection
- + Hose routings protected from external debris

#### REFERENCE

#### 24M & 24

- + Service Magazine M0084405-00
- + Parts Kit 442-1960
- \*24M front axle guards require the installation of updated 24M steering cylinders

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# STEERING CYLINDER UPDATE

#### FEATURE

+ Updated steering cylinders

#### BENEFIT

- + Better sensor protection for longer sensor life
- + Elimination of need for trim files
- + Compatible with front axle guards

#### REFERENCE

- + Service Magazine M0083586-00
- + Parts Kit 489-2403 & 489-2406

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### ENGINE COMPRESSION BRAKE

#### FEATURE

+ Compression Brake / Engine Brake

#### BENEFIT

- + Enhances the braking capability of the machine
- + Reduces the overheating of the brake pads

- + Reduces owning & operating cost
- + Improves machine uptime

#### REFERENCE

+ Special Instruction Media Number REBE5664-00

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### STROKE-LIMITING COLLARS

#### FEATURE

- + Low-cost collar to reduce incidence of drawbar to frame contact when lifting the blade
- The collars are specifically designed to be wear items and can easily be installed or removed in minutes using hand tools

#### BENEFIT

 Protects the frame and drawbar by reducing the instances and intensity when contact of the drawbar to frame is made  Reduces the need to repair the frame and drawbar by welding or eventually replacing the drawbar / circle due to damage

#### REFERENCE

- 16, 16M, 16M3, 18 & 18M3:
  - + Special Instruction Media 1 Number M0075466 14
  - + Parts Kit 519-2824

#### 24M & 24

- + Special Instruction Media Number M0075466
- + Parts Kit 519-2825

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### ADVANCED CONTROL JOYSTICKS

#### FEATURE

+ Moves Cat GRADE & Cat GRADE with Cross Slope control buttons to joystick controls

#### BENEFIT

- + Easily controls Cat GRADE & Cat GRADE with Cross Slope
- + Improves operator efficiency
- + Enhances operator comfort
- + Controls auxiliary hydraulic functions

#### REFERENCE

14M, 14M3, 14, 16M, 16M3, 16, 18M3, & 18

- + Special Instruction Media Number REHS8847
- + Parts Kit 463-6258

#### 24M & 24

- + Special Instruction Media Number REHS8847
- + Parts Kit 463-6258

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### ADVANCED CONTROL JOYSTICKS CONTINUED



### LONG-LIFE CIRCLE-DRAWBAR WEAR STRIPS

#### FEATURE

+ Long-life circle-drawbar wear strips

#### BENEFIT

+ Best for harsh applications and where frequent adjustment is not possible.

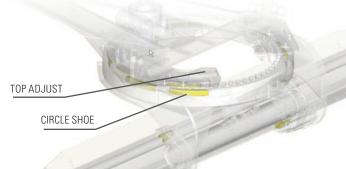
#### REFERENCE

Top Adjust Wear Strips

- + Media Number PEHJ0314-00
- + Part 352-1002

**Circle Shoe Wear Strips** 

- + Media Number PEHJ0314-00
- + Part 6G-4372





### LONG-LIFE BLADE RAIL WEAR STRIPS

#### FEATURE

+ Long-life blade rail wear strips

#### BENEFIT

+ Last up to 3 times as long as the standard offering, adjust and replace less often

#### REFERENCE

14M, 14M3, 14, 16M, 16M3, 16, 18M3 & 18

- + Service Magazine M0101151-01
- + Part 565-6898

#### 24M & 24

- + Service Magazine M0101151-01
- + Top: Part 565-6900
- + Bottom: Part 565-6899



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### LONG-LIFE TIP BEARINGS

#### FEATURE

+ Long-life tip bearings

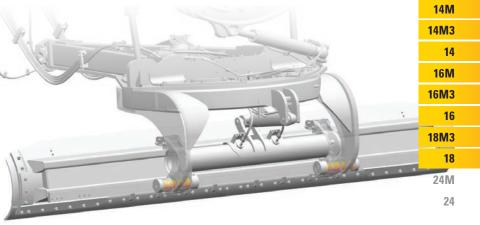
#### BENEFIT

+ Last up to 3 times as long as the standard offering, adjust and replace less often

#### REFERENCE

14M, 14M3, 14, 16M, 16M3, 16, 18M3 & 18

- + Part 574-2091
- \* Can be used with Greasable Blade Tilt Pin Assembly



### GREASABLE BLADE TIP PIN ASSEMBLY

#### FEATURE

+ Greasable blade tip pins

#### BENEFIT

- + Greasable
- + Recessed grease zerk for protection

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+ Improves life

#### REFERENCE

+ Service Magazine M0107870-00

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### LONG-LIFE LIFT & CENTER SHIFT CYLINDER INSERTS

#### FEATURE

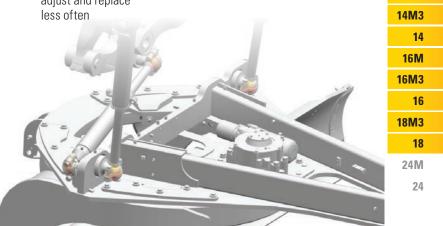
+ Long-life lift & center shift cylinder inserts

#### BENEFIT

 + Last up to 3 times as long as the standard offering, adjust and replace less often

#### REFERENCE

14M, 14M3, 14, + Part 575-5623 16M, 16M3, 16, 18M3 & 18 + Part 580-1081



### MOLDBOARD WEAR PLATES

#### FEATURE

#### REFERENCE

+ Moldboard wear plates

#### BENEFIT

+ Increase service life of the moldboard

+ Service Magazine M0088727-01

Part No.	Length	Radius	*The 18M3, 18, 24M	14M
4D-5820 1600 mm / 63 in		343 mm / 13.5 in	& 24 come standard with moldboard	14M3
4D-5821	1905 mm / 75 in	343 mm / 13.5 in	wear plates. If	141113
8W-5265	1600 mm / 63 in	413 mm / 16.26 in	those plates need replaced, please	14
8W-5266 1905 mm / 75 i		413 mm / 16.26 in	use the Service Magazine and part	16M
385-6748	2210 mm / 87 in	413 mm / 16.26 in	numbers listed.	16M3
136-2541	5188 mm / 204 in	424 mm / 16.7 in		16
				18M3
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# **CAPSURE RIPPER TIPS & SHANK PROTECTORS**

#### FEATURE

+ Hammerless retention ripper tips

#### BENEFIT

- Improved safety due to the hammerless design retention technology the ripper tip and shank protector are easily installed with a 180 degree turn of a ½ inch ratchet
- + Quicker replacements and less machine downtime
- + Shank protector extends shank life
- + Can be used on a Cat ripper shank without any modifications

\*To use shank protectors, please ensure your ripper shank has a hole to accept the shank protector hardware. Shanks with holes for the shank protector started being offered in late 2016. If you want the shank protector, but do not have the correct shank, you can order the proper shank (part # 484-8282)

#### REFERENCE

- + Media Number PELJ2079
- + Centerline Tip: 472-0824
- + Penetration Tip: 472-0825
- + Shank Protector: 472-0827
- + Pin Kit: 473-3816
- + Spacer: 198-4769



### NEXT-GEN FILTERS

#### FEATURE

+ Cartridge Style Filters

#### BENEFIT

- + Hydraulic: The new media offers extremely good flow characteristics with low pressure drop, which helps minimize filter bypass in the transmission system during cold-start situations
- + Fuel: Fuel Filters provide unsurpassed contamination control to ensure that only clean fuel reaches your engine
- + Lower Cost: The filter housing is reusable, so only the cartridge needs to be changed, lowering disposal costs

#### REFERENCE

+ Service Magazine M0110125-00





### GEN 2 STEERING UPGRADE KIT

#### FEATURE

#### REFERENCE

+ New Steering Control Valve

#### BENEFIT

Improves Performance

- + Reduces fault codes
- + Eliminates external PRV
- + Includes an internal pilot bleed warning circuit

### Improves Reliability

+ Reduces connections

### 16M

- + Service Magazine M0064288-01
- + Parts Kit 494-9355

#### 24M

- + Special Instruction Media Number REHS7189-05
- + Parts Kit 435-4711 14M3

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### FRONT FRAME DOUBLER PLATE UPDATE

#### FEATURE

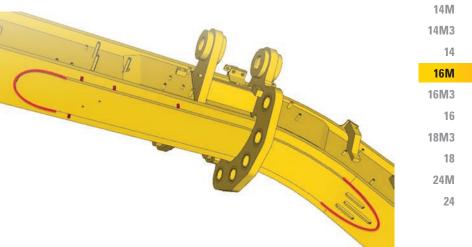
+ Front frame bottom plate weld improvement

#### BENEFIT

+ Increases the life of the weld resulting in longer frame life

#### REFERENCE

+ Special Instruction Media Number REHS8792-01



# FRONT FRAME FISH PLATE UPDATE

#### FEATURE

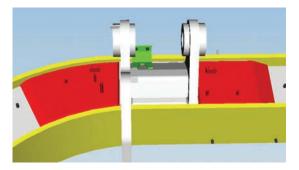
+ Front frame fish plate replacement for weld improvement.

#### BENEFIT

+ Redesigned plate is easier to weld, resulting in longer life

#### REFERENCE

+ Special Instruction Media Number REHS8792-01



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### PLATE ADDITION TO DRAWBAR

#### FEATURE

+ Plate addition to drawbar closes the back of the circle

#### BENEFIT

- + Plate prevents future cracking from center shift contact with bump pad
- + Prevents unscheduled machine downtime.

#### REFERENCE

+ Special Instruction Media Number REHS9813-02

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# **TORSIONAL COUPLER UPDATE**

#### FEATURE

+ 20-bolt coupler, piston and seals

#### BENEFIT

- + Longer service life to align with transmission rebuilds
- + Protects from

#### REFERENCE

+ Special Instruction Media Number BFHS4299-01



### THRUST WASHER UPDATE

#### FEATURE

+ Thrust washer replacement

#### BENEFIT

+ Prevents damage to the lip seal and associated damage to the tandem housing or top hat housing

#### REFERENCE

+ Service Magazine SEPD1202-00



### TIE ROD UPDATE

#### FEATURE

+ More robust replacement for bent tie rods—15mm greater outer diameter

#### BENEFIT

+ Bent tie rods contribute to front tire misalignment

#### REFERENCE

+ Special Instruction Media Number REBE7107-00



### 14M3 14M3 14 16M 16M3 16 18M3 18 18 18 24M

### TIRE MONITORING SYSTEM

#### FEATURE

+ Monitors high / low pressure, monitors high temperature, manages optimal tire limits, waterproof sensor, realtime data, facilitates proper tire inflation

#### BENEFIT

- + Early warnings help avoid premature tire failure, reducing costs
- + Hazardous conditions prevented (overheated tire)



- Optimal fuel consumption; optimal traction, braking, and turning; reduced unexpected downtime
- + Tire issues assessed before additional tire damage occurs; helps schedule preventive maintenance

#### REFERENCE

+ Special Instruction Media Number REHS9135-05



# DRIVELINE UPGRADE KIT

#### FEATURE

+ Upgrades serial number prefix B9K drivelines

#### BENEFIT

- + Average 10% reduction in fuel consumption
- + Lower vibration levels increases general machine and component durability
- + Reduced exhaust temperatures provides extended exhaust component life
- + Improved engine response at low idle with multiple hydraulic functions
- + Smoother and quicker shifting while working uphill or under load

+ Increase high altitude derate from 5,000 to 9,500ft for T3 Engine

#### REFERENCE

- + Special Instruction Media Number REHS4297-02
- + Parts Kit

435-4709 ENGINE KIT	14M
435-4710 ALTERNATOR KIT	14M3
435-4712 TRANSMISSION KIT	14

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### MESABI RADIATOR UPGRADE KIT

#### FEATURE

+ Clog-resistant radiator

#### BENEFIT

- + More durable
- + Reduces plugging
- + Reduces maintenance (individual cores can be replaced)
- + Easier to clean

#### REFERENCE

- + Special Instruction Media Number REHS8744-01
- + Part Kit 453-3122

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### POWERED ARM PODS

#### FEATURE

+ Motorized replacement for manual pod height adjuster

#### BENEFIT

- + More quickly change arm pod height
- + Greater operator comfort

#### REFERENCE

+ Service Magazine M0084759-01



# HYDRAULIC FLUID MONITORING

#### **FEATURE**

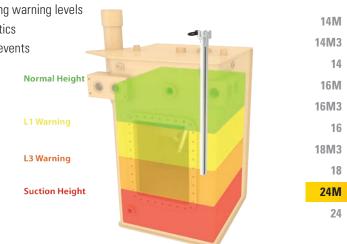
+ Real-time hydraulic fluid monitoring

#### BENEFIT

- + Dynamic hydraulic fluid level monitoring
- + Increasing warning levels
- + Diagnostics
- + Logged events

#### REFERENCE

- + Special Instruction Media Number RFHS9814-00
- + Parts Kit 466-0822



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