

User: E500

Catalog #:

140H Motor Graders, 2002
SN: 02ZK07804Current Hours (SMU): 10928
Sale Date: 06/13/2002

Delivery Date: 06/13/2002

Service History

Service Date	Invoice Type	Hours	Description	Service Notes
06/25/2002	Service	4	PERFORM MAINTENANCE ON PRE-DELIVERY INSPECTION	
06/25/2002	Service	4	INSPECT & MAINTAIN 10 SERVICE HOUR MAINT	INSPECTED MACHINE - CHECKED ALL OIL LEVELS - GREASED MACHINE - ADDED TO TRANSMISSION. ANTIFREEZE SAFE TO 35 BELOW - ALL OTHER LEVELS - ENGINE, COOLANT & HYDRAULICS OKAY - CHECKED FOR ANY LEAKS - NONE PRESENT.
06/25/2002	Service	4	PERFORM MAINTENANCE ON PRE-DELIVERY INSPECTION	
06/25/2002	Service	4	CLEAN MACHINE	SANDED SNOW EQUIPMENT - MASKED AND PAINTED - REMOVED MASKING AND CLEANED.
06/25/2002	Service	4	INSTALL RADIO	INSTALLED RADIO ON MACHINE - CHECKED ALL STATIONS AND ALL BANDS ON RADIO - RAISED THE ANTENNA & TIGHTENED - RADIO WORKED OKAY.
06/25/2002	Service	4	INSTALL MIRROR	ASSEMBLED MIRRORS & INSTALLED ON MACHINE.
06/25/2002	Service	4	REMOVE AIR DRYER	REMOVED THE AIR DRYER FROM THE OUTSIDE & INSTALLED IT ON THE BRACKET ON THE INSIDE - HAD TO REROUTE THE HOSES AND CLAMPS - TIED UP HOSES WITH TIES AND CLAMPS.
06/25/2002	Service	4	INSTALL BEACON/STROBE LIGHT	INSTALLED STROBE LIGHT ON BRACKET AND INSTALLED ON MACHINE - WIRED UP - TRIED UNIT AND WORKED OKAY.
06/25/2002	Service	4	INSTALL BLADE EXTENSION	INSTALLED RIGHT HAND BLADE EXTENSION - HAD TO GRIND OFF WHERE EXISTING CUTTING EDGE HIT - GROUND AND IT FIT OKAY.
06/25/2002	Service	4	INSTALL SNOW WING	INSTALLED SNOW WING BRACKET - REAR BRACKET - PLUMBED ALL HOSES - TRIED EVERYTHING AND IT ALL WORKED - INSTALLED WING & GREASED ALL FITTINGS - TIGHTENED ALL BOLTS.
06/25/2002	Service	4	INSTALL PARALLEL LIFT GROUP	INSTALLED FRONT SNOW PLOW BRACKET - TIGHTENED ALL BOLTS - RAN HOSES TO PLATE.
06/17/2008	Service	4000	REMOVE & INSTALL TRANS & DIFFERENTIAL UNIT	CUSTOMER COMPLAINT: BRASS MATERIAL IN OIL AND SCREEN CAUSE OF FAILURE: THE BEARING ARE SEIZING TO THE CROSS SHAFT AND SPINNING INSIDE THE GEAR ASSEMBLY. WE TALKED TO CATERPILLAR THEY TOLD US TO MAKE SURE THE BRASS BEARINGS IN THE SPIDER GEARS WERE PRESS IN AT LEAST .006 OF AN INCH. WE PRESSED THEM IN SO THAT WE HAD THAT MUCH CLEARANCE. RESULTANT DAMAGE: BEARINGS WERE SPINNING IN THE SPIDER GEARS AND GETTING HOT. ALSO THE SPIDER ASSEMBLY HAD BEEN HOT AND HAD A LOT OF BRASS TRANSFER. THIS FAILURE SENT BRASS CONTAMINATION TROUGH OUT THE SYSTEM. REPAIR COMMENTS: DRAIN TRANSMISSION AND COOLING SYSTEM. EVACUATE A/C SYSTEM. REMOVE EXHAUST & AIR INTAKE SYSTEM. REMOVE HOOD, SIDE PANELS, BATTERY'S, RADIATOR SUPPORT, RADIATOR HOSES, AIR TANK, AIR LINES, FAN SUPPORT, FUEL TANK AND LINES. REMOVE HYDRAULIC HOSES AND CLEAN. DISCONNECT ALL WIRING TO COMPONENTS. REMOVE TRANSMISSION FOR REPAIR. INSTALL TRANSMISSION AND TORQUE BOLTS. INSTALL HYDRAULIC LINE WITH NEW O-RINGS. INSTALL NEW FILTER AND CLEAN BYPA
06/17/2008	Service	4000	REMOVE & INSTALL TC/TRANS OIL COOLER	FOR CONTAMINATION YY CUSTOMER COMPLAINT: BRASS IN TRANS SCREEN CAUSE OF FAILURE: DIFFERENTIAL RESULTANT DAMAGE: CONTAMINATION REPAIR COMMENTS: OR TRANS OIL COOLER WAS ORDERED. OLD COOLER WAS REMOVED FROM ENGINE. PARTS WERE CLEANED UP AND ASSEMBLED TO NEW COOLER. COOLER WAS INSTALLED ON ENGINE USING NEW GASKETS AND SEAL WHERE REQUIRED. ALL BOLTS WERE TORQUED TO SPECS. CUSTOMER COMPLAINT: BRASS IN TRANS SCREEN CAUSE OF FAILURE: DIFFERENTIAL RESULTANT DAMAGE: CONTAMINATION REPAIR COMMENTS: OR TRANS OIL COOLER WAS ORDERED. OLD COOLER WAS REMOVED FROM ENGINE. PARTS WERE CLEANED UP AND ASSEMBLED TO NEW COOLER. COOLER WAS INSTALLED ON ENGINE USING NEW GASKETS AND SEAL WHERE REQUIRED. ALL BOLTS WERE TORQUED TO SPECS.
06/17/2008	Service	4000	REPAIR FOR WARRANTY FINAL DRIVE	FOR LEAKING RIGHT SIDE YY CUSTOMER COMPLAINT: RIGHT SIDE TANDEM IS LEAKING OIL REPAIR COMMENTS: REMOVED THE RIGHT SIDE TANDEM AFTER DRAINING THE OIL AND REMOVED THE FINAL. DISASSEMBLED THE FINAL AND CLEANED. INSTALLED NEW PARTS AND ASSEMBLED. INSTALLED THE TANDEM AND REFILLED WITH OIL.
06/17/2008	Service	4000	REPAIR FOR WARRANTY FINAL DRIVE	FOR LEAKING LEFT SIDE YY CUSTOMER COMPLAINT: LEFT SIDE TANDEM IS LEAKING OIL REPAIR COMMENTS: REMOVED THE LEFT SIDE TANDEM AFTER DRAINING THE OIL AND REMOVED THE FINAL. DISASSEMBLED THE FINAL AND CLEANED. INSTALLED NEW PARTS AND ASSEMBLED. INSTALLED THE TANDEM AND REFILLED WITH OIL.

06/17/2008	Service	4000	REPAIR FOR WARRANTY DIFFERENTIAL	CUSTOMER COMPLAINT: THEY CHANGING OIL AND FOUND THE SCREEN TO BE FULL OF BRASS BEARING. CAUSE OF FAILURE: THE BEARING ARE SEIZING TO THE CROSS SHAFT AND SPINNING INSIDE THE GEAR ASSEMBLY. WE TALKED TO CATERPILLAR THEY TOLD US TO MAKE SURE THE BRASS BEARINGS IN THE SPIDER GEARS WERE PRESS IN AT LEAST .006 OF AN INCH. WE PRESSED THEM IN SO THAT WE HAD THAT MUCH CLEARANCE. RESULTANT DAMAGE: BEARINGS WERE SPINNING IN THE SPIDER GEARS AND GETTING HOT. ALSO THE SPIDER ASSEMBLY HAD BEEN HOT AND HAD A LOT OF BRASS TRANSFER. THIS FAILURE SENT BRASS CONTAMINATION TROUGH OUT THE SYSTEM. REPAIR COMMENTS: COMPLETELY DISASSEMBLED THE DIFFERENTIAL CLEANED UP ALL REUSABLE PARTS. COMPLETELY RESEALED AND RE BEARING THE DIFFERENTIAL. INSTALL A NEW 154-2689 SPIDER AND ALL FOUR 155-2283 PINION GEARS. WHEN WE CALLED CATERPILLAR ABOUT THE PROBLEM WE WERE HAVING WITH THESE PINION GEARS AND SPIDER ASSEMBLIES, THEY SAID TO MAKE SURE WE HAD ENOUGH CLEARANCE BETWEEN THE BRASS BEARING IN THE PINION GEARS AND THE
06/17/2008	Service	4000	REPAIR FOR WARRANTY DIFFERENTIAL	
06/17/2008	Service	4000	REPAIR POWER SHIFT TRANSMISSION	BEFORE FAILURE OVERHAUL GIVES YOU A 2 YEAR OR 2,000 HOUR WARRANTY. TO VALIDATE WARRANTY, COMPLETE OIL SYSTEM MUST BE CLEANED AND FLUSHED PRIOR TO INSTALLATION OF REBUILT TRANSMISSION/TORQUE CONVERTER AND AN OIL SAMPLE TAKE AFTER 10 HOURS OPERATION AND EVERY 500 HOURS.////////// DISASSEMBLE, INSPECT, CLEAN TRANSMISSION. REUSED ALL BEARINGS, REPLACED ALL SEALS AND ASSEMBLED TRANSMISSION. INSTALLED ALL QUOTED PARTS THAT WAS OK. INSPECTED TRANSMISSION OIL PUMP, ALL PARTS COULD BE REUSED, RESEALED, ASSEMBLED. INSTALLED TRANSMISSION ONTO TEST BENCH, TRANSMISSION TESTED IN SPEC.
06/17/2008	Service	4000	ORDER PARTS POWER SHIFT TRANSMISSION	THIS SEGMENT IS FOR PARTS NOT INCLUDED IN THE GUARANTEED REPAIR OPTION
06/17/2008	Service	4000	REMOVE & INSTALL TRANS & DIFFERENTIAL UNIT	CUSTOMER COMPLAINT: BRASS MATERIAL IN OIL AND SCREEN CAUSE OF FAILURE: THE BEARING ARE SEIZING TO THE CROSS SHAFT AND SPINNING INSIDE THE GEAR ASSEMBLY. WE TALKED TO CATERPILLAR THEY TOLD US TO MAKE SURE THE BRASS BEARINGS IN THE SPIDER GEARS WERE PRESS IN AT LEAST .006 OF AN INCH. WE PRESSED THEM IN SO THAT WE HAD THAT MUCH CLEARANCE. RESULTANT DAMAGE: BEARINGS WERE SPINNING IN THE SPIDER GEARS AND GETTING HOT. ALSO THE SPIDER ASSEMBLY HAD BEEN HOT AND HAD A LOT OF BRASS TRANSFER. THIS FAILURE SENT BRASS CONTAMINATION TROUGH OUT THE SYSTEM. REPAIR COMMENTS: DRAIN TRANSMISSION AND COOLING SYSTEM. EVACUATE A/C SYSTEM. REMOVE EXHAUST & AIR INTAKE SYSTEM. REMOVE HOOD, SIDE PANELS, BATTERY'S, RADIATOR SUPPORT, RADIATOR HOSES, AIR TANK, AIR LINES, FAN SUPPORT, FUEL TANK AND LINES. REMOVE HYDRAULIC HOSES AND CLEAN. DISCONNECT ALL WIRING TO COMPONENTS. REMOVE TRANSMISSION FOR REPAIR. INSTALL TRANSMISSION AND TORQUE BOLTS. INSTALL HYDRAULIC LINE WITH NEW O-RINGS. INSTALL NEW FILTER AND CLEAN BYPA
06/17/2008	Service	4000	CLEAN MACHINE	REPAIR COMMENTS: BRING MACHINE INTO WASH BAY AND STEAM CLEAN TRANSMISSION AREA AND ENGINE COMPARTMENT DONE BY KEITH MCMANNUS.
06/17/2008	Service	4000	REMOVE & INSTALL TC/TRANS OIL COOLER	FOR CONTAMINATION YY CUSTOMER COMPLAINT: BRASS IN TRANS SCREEN CAUSE OF FAILURE: DIFFERENTIAL RESULTANT DAMAGE: CONTAMINATION REPAIR COMMENTS: OR TRANS OIL COOLER WAS ORDERED. OLD COOLER WAS REMOVED FROM ENGINE. PARTS WERE CLEANED UP AND ASSEMBLED TO NEW COOLER. COOLER WAS INSTALLED ON ENGINE USING NEW GASKETS AND SEAL WHERE REQUIRED. ALL BOLTS WERE TORQUED TO SPECS. CUSTOMER COMPLAINT: BRASS IN TRANS SCREEN CAUSE OF FAILURE: DIFFERENTIAL RESULTANT DAMAGE: CONTAMINATION REPAIR COMMENTS: OR TRANS OIL COOLER WAS ORDERED. OLD COOLER WAS REMOVED FROM ENGINE. PARTS WERE CLEANED UP AND ASSEMBLED TO NEW COOLER. COOLER WAS INSTALLED ON ENGINE USING NEW GASKETS AND SEAL WHERE REQUIRED. ALL BOLTS WERE TORQUED TO SPECS.
06/17/2008	Service	4000	REMOVE & INSTALL CRANKSHAFT REAR SEAL	CUSTOMER COMPLAINT: BRASS IN TRANS SCREEN CAUSE OF FAILURE: DIFFERENTIAL RESULTANT DAMAGE: CONTAMINATION REPAIR COMMENTS: COUPLER WAS REMOVED FROM FLYWHEEL AND INSPECTED. FLYWHEEL WAS REMOVED AND WAS CLEANED. REAR MAIN SEAL WAS REPLACED. FLYWHEEL HOUSING WAS CLEANED UP FLYWHEEL WAS INSTALLED AND BOLTS WERE TORQUED TO SPECS. COUPLER WAS REUSED AND INSTALLED, BOLTS WERE TORQUED TO SPECS. FLYWHEEL HOUSING WAS COVERED TO ELEMIMATE FURTHER CONTAMINATION. CUSTOMER COMPLAINT: BRASS IN TRANS SCREEN CAUSE OF FAILURE: DIFFERENTIAL RESULTANT DAMAGE: CONTAMINATION REPAIR COMMENTS: COUPLER WAS REMOVED FROM FLYWHEEL AND INSPECTED. FLYWHEEL WAS REMOVED AND WAS CLEANED. REAR MAIN SEAL WAS REPLACED. FLYWHEEL HOUSING WAS CLEANED UP FLYWHEEL WAS INSTALLED AND BOLTS WERE TORQUED TO SPECS. COUPLER WAS REUSED AND INSTALLED, BOLTS WERE TORQUED TO SPECS. FLYWHEEL HOUSING WAS COVERED TO ELEMIMATE FURTHER CONTAMINATION.

				AND FAN BELTS YY
06/17/2008	Service	4000	REMOVE & INSTALL FAN DRIVE	CAUSE OF FAILURE: ALT PULLEY WORN RESULTANT DAMAGE: BELTS WORN REPAIR COMMENTS: REMOVE ALT AND INSTALL NEW PULLEY. INSTALL BELTS AND ADJUST TENSION.
06/17/2008	Service	4000	REPAIR FOR WARRANTY FINAL DRIVE	FOR LEAKING RIGHT SIDE YY CUSTOMER COMPLAINT: RIGHT SIDE TANDEM IS LEAKING OIL REPAIR COMMENTS: REMOVED THE RIGHT SIDE TANDEM AFTER DRAINING THE OIL AND REMOVED THE FINAL. DISASSEMBLED THE FINAL AND CLEANED. INSTALLED NEW PARTS AND ASSEMBLED. INSTALLED THE TANDEM AND REFILLED WITH OIL.
06/17/2008	Service	4000	REPAIR FOR WARRANTY FINAL DRIVE	FOR LEAKING LEFT SIDE YY CUSTOMER COMPLAINT: LEFT SIDE TANDEM IS LEAKING OIL REPAIR COMMENTS: REMOVED THE LEFT SIDE TANDEM AFTER DRAINING THE OIL AND REMOVED THE FINAL. DISASSEMBLED THE FINAL AND CLEANED. INSTALLED NEW PARTS AND ASSEMBLED. INSTALLED THE TANDEM AND REFILLED WITH OIL.
06/17/2008	Service	4000	REPAIR FOR WARRANTY DIFFERENTIAL	CUSTOMER COMPLAINT: THEY CHANGING OIL AND FOUND THE SCREEN TO BE FULL OF BRASS BEARING. CAUSE OF FAILURE: THE BEARING ARE SEIZING TO THE CROSS SHAFT AND SPINNING INSIDE THE GEAR ASSEMBLY. WE TALKED TO CATERPILLAR THEY TOLD US TO MAKE SURE THE BRASS BEARINGS IN THE SPIDER GEARS WERE PRESS IN AT LEAST .006 OF AN INCH. WE PRESSED THEM IN SO THAT WE HAD THAT MUCH CLEARANCE. RESULTANT DAMAGE: BEARINGS WERE SPINNING IN THE SPIDER GEARS AND GETTING HOT. ALSO THE SPIDER ASSEMBLY HAD BEEN HOT AND HAD A LOT OF BRASS TRANSFER. THIS FAILURE SENT BRASS CONTAMINATION TROUGH OUT THE SYSTEM. REPAIR COMMENTS: COMPLETELY DISASSEMBLED THE DIFFERENTIAL CLEANED UP ALL REUSABLE PARTS. COMPLETELY RESEALED AND RE BEARING THE DIFFERENTIAL. INSTALL A NEW 154-2689 SPIDER AND ALL FOUR 155-2283 PINION GEARS. WHEN WE CALLED CATERPILLAR ABOUT THE PROBLEM WE WERE HAVING WITH THESE PINION GEARS AND SPIDER ASSEMBLIES, THEY SAID TO MAKE SURE WE HAD ENOUGH CLEARANCE BETWEEN THE BRASS BEARING IN THE PINION GEARS AND THE
06/17/2008	Service	4000	REPAIR FOR WARRANTY DIFFERENTIAL	
06/17/2008	Service	4000	REPAIR POWER SHIFT TRANSMISSION	BEFORE FAILURE OVERHAUL GIVES YOU A 2 YEAR OR 2,000 HOUR WARRANTY. TO VALIDATE WARRANTY, COMPLETE OIL SYSTEM MUST BE CLEANED AND FLUSHED PRIOR TO INSTALLATION OF REBUILT TRANSMISSION/TORQUE CONVERTER AND AN OIL SAMPLE TAKE AFTER 10 HOURS OPERATION AND EVERY 500 HOURS.////////// DISASSEMBLE, INSPECT, CLEAN TRANSMISSION. REUSED ALL BEARINGS, REPLACED ALL SEALS AND ASSEMBLED TRANSMISSION. INSTALLED ALL QUOTED PARTS THAT WAS OK. INSPECTED TRANSMISSION OIL PUMP, ALL PARTS COULD BE REUSED, RESEALED, ASSEMBLED. INSTALLED TRANSMISSION ONTO TEST BENCH, TRANSMISSION TESTED IN SPEC.
06/17/2008	Service	4000	ORDER PARTS POWER SHIFT TRANSMISSION	THIS SEGMENT IS FOR PARTS NOT INCLUDED IN THE GUARANTEED REPAIR OPTION
08/02/2011	Service	7293	REPAIR BRAKE LINING	CUSTOMER COMPLAINT: DIAGNOSE HARD BRAKING REPAIR PROCESS COMMENTS: CUSTOMER COMPLAINED BRAKE PEDAL WAS HARD TO GET MACHINE TO STOP. I CONNECTED PRESSURE GAUGE INTO AIR LINES AT TANDEM CONNECTIONS. WHEN BRAKE PEDAL WAS APPLIED ONLY COULD GET 80 PSI - MOVED GAUGE TO TANK - TANK PRESSURE WAS ONLY 100 PSI. I ADJUSTED GOVERNOR TO LET AIR PRESSURE BUILD UP TO 140 PSI - I RECHECKED PRESSURE AT VALVE - IT WAS STILL ONLY 80 PSI WHEN PEDAL WAS APPLIED. CONNECTED GAUGE TO SUPPLY SIDE AT VALVE - THERE WAS 140 PSI TO VALVE. PROBLEM WAS DIAGNOSED AS BAD BRAKE VALVE.
08/02/2011	Service	7293	REPAIR AIR FILTER ELEMENT	CUSTOMER COMPLAINT: AIR DRYER WAS LEAKING AIR REPAIR PROCESS COMMENTS: AIR DRYER VENT WAS LEAKING WHEN PUMP WAS NOT PUMPING - I DISCONNECTED AIR LINES - REMOVED DRYER FROM MACHINE. I DISASSEMBLED DRYER - CLEANED ALL PARTS. REASSEMBLED WITH NEW SEALS AND DESICANT THAT WAS IN KIT. AFTER DRYER WAS ASSEMBLED I INSTALLED IT BACK ONTO MACHINE - RECONNECTED ALL LINES THAT WERE DISCONNECTED. STARTED MACHINE - BUILT AIR PRESSURE IN SYSTEM - FOUND NO AIR LEAKS FROM VENT AT THIS TIME.
08/02/2011	Service	7293	REMOVE & INSTALL SVC BRAKE CONTROL VALVE	CUSTOMER COMPLAINT: REMOVE BRAKE VALVE REPAIR PROCESS COMMENTS: DISCONNECTED HOSES AND LINKAGES THAT WENT TO BRAKE VALVE. REMOVED BRAKE VALVE FROM BOTTOM SIDE OF CAB - SWITCHED ALL FITTINGS AND COMPONENTS NEEDED TO NEW 8W-5651 BRAKE VALVE. INSTALLED BRAKE VALVE BACK ONTO MACHINE - RECONNECTED HOSES AND LINKAGES THAT WERE REMOVED. STARTED MACHINE - BUILT AIR PRESSURE UP - CHECKED BRAKE PRESSURE AT TANDEM - PRESSURE MODULATED AND PRESSURE ROSE TO 125 PSI WHEN PEDAL WAS DEPRESSED. CHECKED OPERATION OF MACHINE - BRAKES LOCKED UP WHEN PEDAL WAS HIT HARD - OPERATED NORMAL WHEN GRADUAL DEPRESSING PEDAL.
08/02/2011	Service	7293	DELIVERY PRE-SAFETY CHECK	

				NOT STARTING YY CUSTOMER COMPLAINT: THE CUSTOMER HAD A COMPLAINT OF THE MACHINE NOT STARTING. CAUSE OF FAILURE: THE VHP AND SHUT OFF SOLENOID SHORTED INTERNALLY. RESULTANT DAMAGE: THE MACHINE WOULD NOT START. REPAIR PROCESS COMMENTS: THE MACHINES SOLENOID WAS REMOVED - ADJUSTED & INSTALLED. THE MACHINE WAS STARTED & RETURNED TO SERVICE.
03/16/2012	Service	7638	REPAIR ENGINE	
03/16/2012	Service	7638	TRAVEL TO/FROM	
03/16/2012	Service	7638	COMPLETE PRE-SAFETY CHECK	
				BROKEN CRANKSHAFT YY CUSTOMER REMOVED ENGINE AND BROUGHT IT IN TO HAVE OVERHAULED. SENT TO MLSP. AND THEY DISASSEMBLED THE ENGINE. THEY FOUND THE CRANKSHAFT WAS BROKEN IN TWO PIECES, AND THE BEARINGS SPUN IN THE BLOCK. WITH ALL OF THE DAMAGE TO THE ENGINE, FIGURES WERE PUT TOGETHER ON WHAT WOULD BE THE MOST COST EFFECTIVE. A NEW ENGINE WAS THE MOST BENEFICIAL ON THIS JOB. AN NEW 146-4337 TIER ONE ENGINE WAS ORDERED. WENT THROUGH ALL OF THE PARTS THAT WERE IN A BIG PALLET BOX, LOOKING FOR BRACKETS, FITTINGS, AND ANYTHING THAT NEEDED TO GO ON THE ENGINE. CLEANED UP ALL OF THE HEATER HOSE FITTINGS, AND INSTALLED IN ENGINE WITH TEFLON TAPE ON THE THREADS. INSTALLED THE OUTPUT FITTING OF THE AIR COMPRESSOR, AND THE AIR GOVERNOR CONTROL LINES. ON THE FUEL SYSTEM, INSTALLED THE ORIGINAL SWITCH, WITH A NEW ORING. INSTALLED THE FITTING THAT HAS A 1/8 HOLE WITH A (1/8) PLUG IN IT. CLEANED UP THE LINE THAT GOES TO THE TRANSFER PUMP AND INSTALLED BACK
07/18/2015	Service	1	ASSEMBLE ENGINE	
07/18/2015	Service	1	TROUBLESHOOT ENGINE	DISASSEMBLED ENGINE FOUND BROKEN CRANKSHAFT WHICH CAUSED FRETTING TO THE MAIN CAPS. THE BLOCK WAS DAMAGED BEYOND REPAIR. CUSTOMER ORDERED A NEW ENGINE. SENT ALL PARTS BACK TO FORT DODGE. JDN
07/18/2015	Service	1	COMPLETE PRE-SAFETY CHECK	
10/21/2016	Service	1	HONE & RESEAL LIFT/HOIST CYLINDER	REPAIR PROCESS COMMENTS: DISASSEMBLED CYLINDER. FOUND GOUGED ROD, AND TORN U CUP SEAL. BUFFED AND CLEANED SURFACES AND SEAL GROOVES IN HEAD AND PISTON. INSTALLED NEW SEALS IN PISTON AND HEAD. SENT ROD TO RECHROME. INSTALLED HEAD AND PISTON ONTO ROD. TORQUED PISTON NUT TO STANDARD TORQUE. INSTALLED ROD PACK INTO BARREL. TORQUED HEAD TO 440#. PRESSURE TESTED CYLINDER GOOD. ENGRAVED WORK ORDER.
10/21/2016	Service	1	EXTRA PARTS/LABOR/MISFOR LIFT/HOIST CYLINDER	
10/21/2016	Service	1	COMPLETE PRE-SAFETY CHECK	
10/21/2016	Service	1	INSPECT MACHINE	
12/05/2017	Parts	0		
12/16/2017	Parts	0		
12/29/2017	Parts	0		
12/30/2017	Parts	0		
12/30/2017	Parts	0		
12/30/2017	Parts	0		
04/14/2018	Parts	0		
04/19/2018	Parts	0		
05/24/2018	Parts	0		
10/03/2018	Service	9999999	REPAIR ARTICULATION CYLINDER	
10/03/2018	Service	9999999	RESEAL ARTICULATION CYLINDER	CYLINDER LEAKING AT ROD END. REPAIR PROCESS COMMENTS: DISASSEMBLED CYLINDER. NEEDED TO HEAT BARREL TO REMOVE HEAD. CLEANED AND INSPECTED PARTS. FOUND: SCORE IN ROD; ROD SEALS ERODED; EYE SEALS CRACKED AND FALLING APART; BARREL EYE BEARING NEARLY 1/16" EGGED; AND ROD EYE BEARING .008" EGGED. WASHED BARREL. QUOTED AND ORDERED PARTS. RESEALED PARTS. ASSEMBLED ROD PACK. TORQUED PISTON BOLT TO 1320 FT/LBS. ASSEMBLED CYLINDER. TORQUED HEAD TO 440 FT/LBS. TESTED GOOD. STAMPED, TAGGED, AND WRAPPED.
10/03/2018	Service	9999999	EXTRA PARTS/LABOR/MISFOR ARTICULATION CYLINDER	REPAIR PROCESS COMMENTS: PRESSED OUT EYE BEARINGS. CLEANED AND CHECKED EYES. LUBED EYES. PRESSED IN NEW EYE BEARINGS. TOOK ROD TO MACHINE SHOP. PREHEATED ROD. SPOT WELDED SCORE IN ROD. GROUND WELD FLUSH WITH SURFACE OF ROD. POLISHED ROD.
10/03/2018	Service	9999999	COMPLETE PRE-SAFETY CHECK	
10/05/2018	Service	0	TRANSPORT	
10/05/2018	Service	0	ORDER PARTS CUTTING EDGE(S)	
10/05/2018	Service	0	APPLY DISCOUNTS ALLOWED	
10/05/2018	Service	0	TRANSPORT	
10/05/2018	Service	0	COMPLETE PRE-SAFETY CHECK	

12/31/2020	Service	9999999	REPAIR WING CYLINDER	LIFT CYLINDER
12/31/2020	Service	9999999	RESEAL WING CYLINDER	
12/31/2020	Service	9999999	EXTRA PARTS/LABOR/MISFOR WING CYLINDER	
12/31/2020	Service	9999999	COMPLETE PRE-SAFETY CHECK	

Configuration

Configuration Code	Price List	Description
1464337	MAC1	ENGINE S/N: 6NC32178
0P5203	MAC1	_____ EMA
0211754	MAC1	LIFT GROUP CONVA380114
14611C	MAC1	WING W/HYDRB S/N 7YW670 A380114
1516925	MAC1	WARNING LIGHT

After Order Configuration

Date	Description	Repair Cost	Notes
06/25/2002	INSTALL SNOW WING	\$1,296.00	INSTALLED SNOW WING BRACKET - REAR BRACKET - PLUMBED ALL HOSES - TRIED EVERYTHING AND IT ALL WORKED - INSTALLED WING & GREASED ALL FITTINGS - TIGHTENED ALL BOLTS.

PIP / PSP

Start Date	End Date	PIP No.	PIP Type	Hrs Req.	Description	Status
01/17/2003	01/31/2005	PS50591	A	1.00	INSTALL NEW HYD TANK CAP ASSEMBLY	Expired
01/18/2008	01/31/2010	PS51433	A	1.00	Replacing engine enclosure latches on ce	Expired

Historical Warranty

Product Code	Description	Start Date	End Date	Start Hours	End Hours
140H	EPP1 60/7500 PT - 6/UNLMT STD WTY-GOV	06/13/2002	06/13/2007	0	0