

[illegible]

The new engine was installed on August the 18, 2016 at 1350 (in YELLOW/RED) hours. Scroll down this work order to segment #10 in YELLOW and RED to see the notes.

012101 Aug 18, 2016 12:00 AM 1350 1326834 - 01

1326834 - 02

C 035 1000 9076111 9076111 9076111 278.33 COMPLAINT:
CUSTOMER COMPLAINT ABOUT OIL

CONSUMPTION

CAUSE: NOT YET FOUND

COMPLICATION: FOLLOWED T C INSTRUCTIONS &

PERFORMED CYLINDER CUTOUT TEST AND COMPRESSION

TEST #1 READS 350 PSI; #2 READS 405 PSI; #3 READS

395 PSI & #4 READS 400 USED SCOPE TO CHECK #1

CYLINDER BUT COULD NOT SEE ANYTHING REMOVED VALVE

COVER AND #1 INJECTOR PUT COMPRESSED AIR INTO

CYLINDER AND COULD NOT DETECT ANY AIR COMING PAST

VALVES OR PAST RINGS, REASSEMBLED ENGINE AND

COULD STILL SEE BLUE SMOKE COMING FROM EXHAUST

WHILE RUNNING MACHINE SOMETIMES

CHANGED THE CRANKCASE BREATHER FILTER, PERFORMED

FORCED REGENERATION AND CLEARED CODE

1326834 - 04

C 035 7431 9061120 9061120 9061120 583.60 COMPLAINT: MACHINE
HAS 523602-0 CODE

CAUSE: TOO FREQUENT AFTER TREATMENT REGENERATION

COMPLICATION: WHILE CHECKING CODE FOUND ENGINE

WIRING HARNESS DEFECTIVE

CORRECTION: WILL NEED TO REPLACE ENGINE WIRING

HARNESS

1326834 - 05

C 023 1408 9061120 9061120 9061120 1,869.63 COMPLAINT:
CODE 523602-0 & 3251-4

CAUSE: WIRING HARNESS DEFECTIVE

COMPLICATION: INSTALL BRACKET FOR DPF DIFFERENTIAL
PRESSURE SWITCH

CORRECTION: REMOVE, REPLACE WIRING HARNESS TEST
AND INSPECT

1326834 - 06

C 035 7000 9076111 9076111 9076111 501.75 COMPLAINT: ENGINE
USING OIL

CAUSE: CYLINDERS WORN

CORRECTION: GOT ADDED TO TC TICKET. READ THROUGH
TC TICKET. LET ENGINE RUN. WARM UP. MONITOR SMOKE
FROM EXHAUST. PULL ENGINE OIL SAMPLE AND SENT OFF
TO LAB. INSPECTED INTAKE TUBE. INTAKE TUBE WAS

CLEAN. FOUND DIPSTICK WORN. INSPECTED AND FOUND THAT THE DIPSTICK TUBE HAD NOT BEEN REPLACED. PULLED TUBE OUT. FOUND ORING HAD DETERIORATED. ALLOWING DIRT INTAKE INTO THE BLOCK. PULLED GLOW PLUG BRACKET. PULLED GLOW PLUGS. CHECKED COMPRESSION. IT WAS LOW BUT NOT BELOW SPECS. REINSTALLED GLOW PLUGS. REMOVED OIL PRESSURE SWITCH AND INSTALLED PRESSURE TAP AND MANUAL PRESSURE GAUGE. RAN ENGINE AND MONITORED OIL PRESSURE. OIL PRESSURE WAS NOT BELOW SPEC. GOT OIL SAMPLE BACK. ATTACHED TO SEGMENT. HIGH ALUMINUM AND SILICON. AND HIGH FUEL DELETION. FOLLOWED PUBLICATION FOR FUEL DILUTION. TRIED TO FIT SMALL CAMERA DOWN GLOW PLUG HOLE TO INSPECT CYLINDERS WITH BORE A SCOPE BUT THE CAMERA DID NOT FIT DOWN THE HOLE. PULLED VALVE COVER OFF TO ACCESS INJECTORS. PULLED INJECTORS OUT OF HEAD. INSERTED BORE A SCOPE CAMERA. NO DAMAGE NOTICED ON THE PISTON HEADS. COULD NOT ADEQUATELY SEE CYLINDER WALLS. TOO MUCH REFLECTION WITH THE LIGHT ON THE CAMERA. NEED TO PULL THE HEAD. AFTER HEAD WAS PULLED. I INSPECTED CYLINDERS. THERE WAS NO CROSS HATCH LEFT IN THE CYLINDERS. THE WALLS WERE POLISHED TO SMOOTH FINISH. THIS IS THE REASON I COULD NOT SEE ANY THING BUT THE REFLECTION OF THE

LIGHT WITH THE BORE A SCOPE. THE WALLS ARE SHINNED TO A MIRROR FINISH. TOOK PICTURE ATTACHED TO SEGMENT. SENT FINDING TO TC. WE WILL NEED TO PULL THE ENGINE TO REPAIR. PUT BORE A SCOPE INTO INTAKE. FOUND VALVE STEMS WET. INSPECTED VALVES IN HEAD. THE VALVES LOOK LOOSE IN THE VALVE GUIDES. ANOTHER ENTRY POINT FOR THE OIL CONSUMPTION. WILL REMOVE ENGINE AND FIND OUT WHAT STEPS WILL BE TAKEN. EITHER REPAIR OR REPLACE. THE DPF IS SATURATED WITH OIL. WILL NEED TO BE CLEANED OR REPLACED. THE FUEL DILUTION IS BECAUSE THE ENGINE IS TRYING TO REGENERATE TOO OFTEN. AND IT INJECTS FUEL ON THE EXHAUST STROKE TO BE SENT INTO THE DPF IN THE REGEN PROCESS. IN A PUBLICATION ON THE CLEANING AND MAINTAINING OF THE DPF IT SAYS THAT IT RECOMMENDS REPLACING A OIL SATURATED DPF WITH A NEW ONE OR A REMAN.

THE MANAGERS HAVE MADE THE DECISION TO REPLACE WITH A NEW ENGINE. THE NEW ENGINE ASSEMBLY COMES WITH A NEW DPF ALREADY. SO THIS IS THE MOST COST AFFECTIVE PATH TO TAKE.

1326834 - 07

C	010	1326	9076111	9076111	9076111	107.17 COMPLAINT: ENGINE
USING OIL						

CAUSE: DIPSTICK TUBE VIBRATION CAUSED DIPSTICK TO WEAR DOWN AND FOR THE ORING SEAL ON THE TUBE TO DETERIORATE ALLOWING DIRT AND METAL TO BE INTRODUCED INTO THE ENGINE OIL.

CORRECTION: PULLED OLD DIPSTICK AND TUBE. INSTALLED NEW TUBE AND DIPSTICK.

1326834 - 08

C 010 1261 9076111 9076111 9076111 39.14 COMPLAINT: LOW POWER FROM BEGINNING OF OWNER SHIP OF MACHINE.

CAUSE: DEBRIS IN THE TANK CAUSED LITTLE INLINE FILTER ON TRANSFER PUMP TO BE RESTRICTED. SHOULD BE REPLACED EVERY 250 HRS. THERE IS A NEW FILTER OUT THAT IS CLEAR SO THE DEBRIS CAN BE VISIBLY SEEN. IT HAS NOT BEEN CHANGED BECAUSE IT IS STILL THE OLD METAL FILTER.

CORRECTION: REMOVED METAL FILTER AND INSTALLED CLEAR FUEL FILTER ONTO TRANSFER PUMP. CUT OLD FILTER AND FOUND DEBRIS.

1326834 - 09

C 010 1100 9076111 9076111 9076111 659.40 COMPLAINT: ENGINE USING OIL.

CAUSE: DIPSTICK TUBE VIBRATED. CAUSING THE DIPSTICK TO WEAR DOWN AND THE ORING ON THE

DIPSTICK TUBE TO DETERIORATE ALLOWING DIRT INTO
ENGINE. THIS CAUSED THE CYLINDER WALLS TO BECOME
POLISHED AND WORN BECAUSE OF THE DEBRIS IN THE
OIL.

CORRECTION: PULLED INJECTORS OUT. DRAINED COOLANT.
REMOVED ROCK SHAFT. PULLED PUSH TUBES OUT. REMOVED
BOLTS CONNECTING TURBO TO DPF TUBE. DISCONNECTED
AND PLUGGED FUEL SUPPLY AND RETURN LINES FROM
TURBO. REMOVED BOLTS ON EXHAUST MANIFOLD. PULLED
TURBO AND MANIFOLD OFF. REMOVED EGR VALVE AND
COOLER. REMOVED HIGH PRESSURE FUEL RAIL FROM HEAD.
REMOVED HEAD MOUNTING BOLTS. PULLED HEAD OFF OF
ENGINE.

AFTER INSPECTION. SAT HEAD BACK ON BLOCK.
INSTALLED HEAD BOLTS. INSTALLED PUSH TUBES.
INSTALLED ROCK SHAFT. TIGHTENED DOWN EVENLY.
INSTALLED INJECTORS. INSTALLED RETURN LINE.
INSTALLED VALVE COVER. INSTALLED FUEL RAIL.
INSTALLED EGR VALVE AND COOLER. INSTALLED EXHAUST
MANIFOLD AND TURBO.

1326834 - 10

C	010	1000	9076111	9076111	9076111	12,564.11	COMPLAINT:
ENGINE USING OIL							

CAUSE: DIPSTICK TUBE VIBRATED. CAUSING THE

DIPSTICK TO WEAR DOWN AND THE ORING ON THE
DIPSTICK TUBE TO DETERIORATE ALLOWING DIRT INTO
ENGINE. THIS CAUSED THE CYLINDER WALLS TO BECOME
POLISHED AND WORN BECAUSE OF THE DEBRIS IN THE
OIL.

CORRECTION: REMOVED ENGINE FROM MACHINE. TOOK NEW
ENGINE AND INSTALLED INTO MACHINE. CONNECTED
HYDROSTAT. CONNECTED FUEL LINES. SECURED ENGINE.
INSTALLED AC COMPRESSOR. CONNECTED COOLANT LINES.
FILLED ENGINE WITH OIL. INSTALLED NEW ECM IN
MACHINE. CONNECTED HARNESS TO MACHINE HARNESS AND
SECURED. INSTALLED RADIATOR AND OIL COOLER.
CONNECTED FAN TO COOLER. CONNECTED HYDRAULIC LINES
TO COOLER. CONNECTED RADIATOR HOSES. FILLED WITH
COOLANT. FILLED AC SYSTEM. LOWERED AND SECURED
CAB. INSTALLED GRILL. STARTED ENGINE. CHECKED
FLUID LEVELS.

1326834 - 11

C	002	1000	9076111	9076111	9076111	439.60 COMPLAINT: ENGINE
HAS WORN CYLINDERS AND IS USING						

OIL

CAUSE: DIPSTICK TUBE VIBRATION CAUSED DIPSTICK TO
WEAR AND SEAL ON TUBE TO DETERIORATE ALLOWING DIRT
AND METAL INTO THE ENGINE OIL

CORRECTION: TRANSFERRED ENGINE MOUNTS OVER TO NEW

ENGINE. TRANSFERRED COUPLER AND REAR PLATE TO NEW
ENGINE. REMOVED WIRING HARNESS FROM OLD ENGINE.
TRANSFERRED HARNESS BRACKETS TO NEW ENGINE.
TRANSFERRED GROUND STRAP ONTO NEW ENGINE STARTER.
INSTALLED HARNESS ONTO NEW ENGINE AND SECURED
PROPERLY. TRANSFERRED BLOCK HEATER AND CAB HEATER
HOSE FITTING TO NEW ENGINE.

1326834 - 12

C	070	7000	9076111	9076111	9076111	109.90	CORRECTION: CLEAN MACHINE.
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1326834 - 13

C	030	7000	9076111	9076111	9076111	109.90	COMPLAINT: TEST AFTER REPAIR
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CAUSE: NEW ENGINE

CORRECTION: TEST DROVE MACHINE AFTER ENGINE

REPLACEMENT. GOT ENGINE UP TO OPERATING

TEMPERATURE. CHECKED FOR LEAKS. DID NOT FIND ANY.

EVERYTHING LOOKS GOOD.

WO Total: 17,408.43