

WATERTOWN
3934 9TH AVE SE
PO BOX 1570
WATERTOWN SD 57201-1570
Phone: 605-886-5741
Phone: 800-658-5590
Fax: 605-886-7074

TITAN **MACHINERY**

*See us for all of your
Parts and service solutions*

Sold To: 4084475
MERTENS CATTLE CO
15197 477TH AVE
MILBANK SD 57252-5965

SERVICE ORDER: 1417644 CL

Closed Date: 9/15/2022

Ship To: 74899
TITAN MACHINERY
3934 9TH AVE SE
PO BOX 1570
WATERTOWN SD 57201-1570

Invoice #:	1417644 CL	Make:	CASE IH
Sold by:	MITCHELL BARKER	Model:	580Q
Cust PO:		Serial #:	ZJF315424
Cust Fleet#:		Tag:	3025745
Job Desc:	ENGINE FAULT	Hours:	

Service Order Summary

WO #

2494327 SW ENGINE FAULT

\$70,341.02

TOTAL INVOICE

\$70,341.02

Payment Information

749505 CASE PARTS OPEN ACCOUNT

WARRANTY

\$70341.02

Trans ID: 00000000000000000000000000000000

Client ID: 3218739003 Store ID: 1414781007

X

Customer Signature

Phone: 605-432-5498
Cell Phone: 605-949-4516 (JAY)

I hereby authorize the repair work to be done as described above on the machine(s) named hereon. All repair parts are to be billed at your regular price.
I agreed to pay cash for such repair parts and labor on delivery of machine(s) or on terms satisfactory to you and until paid in full any unpaid balance
shall constitute a lien on this machinery.
I further agree that you will not be held responsible for loss or damage to said machinery from fire, theft, or other causes beyond your control.
A service charge will be assessed equal to the lesser of 1.5% per month or the maximum rate permitted by law on all delinquent accounts, until paid in full.

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WO#: 2494327 SW ENGINE FAULT

Comments:

PULL UNIT INTO THE SHOP. REMOVE THE ENGINE OIL FILTER AND FOUND THE FILTER WAS FULL OF METAL. R&R THE HOOD AND TOP ENGINE FRAME. DRAIN THE ANTIFREEZE. R&R THE ENGINE. STRIP THE ENGINE IN ORDER TO GET IT BOLTED TO THE ENGINE STAND. DRAIN THE ENGINE OIL. TEAR DOWN THE ENGINE COMPLETELY TO FIND THE DAMAGE. FOUND A VALVE DROPPED. MADE AN ESTIMATE FOR THE WARRANTY CALCULATOR. REMOVED THE STORED ENGINE DATA, PULLED AN ENGINE OIL SAMPLE. WARRANTY HAD US ORDER A NEW ENGINE. COMPLETELY REASSEMBLED THE OLD ENGINE. REMOVED THE NEW ENGINE FROM THE SHIPPING CRATE AND INSTALLED THE OLD ENGINE. SWAPPED OVER ALL THE PARTS FROM THE OLD ENGINE TO THE NEW ENGINE. FLYWHEEL, ALL COOLANT TUBES, EXHAUST BRAKE, ECM AND WIRING HARNESS, FAN HYDRAULIC PUMP AND DRIVE, ALTERNATOR AND BRACKETS. ENGINE LIFITNG BRACKETS, BELT PULLIES, FRONT CRANKSHAFT DAMPENR, FRONT ENGINE MOUNT. HAD TO PAINT THE ENGINE, DUE TO THE ENGINE WAS NOT PAINTED IN ALOT OF AREAS AND WAS BLACK, QUADTRAC ENGINES ARE PAINTED IVECO GREY. INSTALLED ENGINE AND FILLED WITH ENGINE OIL. PRIMED THE OIL SYSTEM AND BLED THE FUEL SYSTEM. STARTED UNIT. RIGHT AWAY ENGINE HAD A EXHAUST LEAK. FOUND THE CROSSOVER PIPE BETWEEN TURBOS WAS NOT PROPERLY SEATED IN THE CLAMPS. ADJUSTED THE PIPE TO GET IT TO SEAL CORRECTLY. RAN UNIT AND FOUND THE VALVE TRAIN WAS MAKING ALOT OF NOISE. CONTACTED THE REMAN CENTER AND THEY HAD US CHECK THE BELT AND THE FUEL PUMP. THEY FINALLY LET US CHECK THE OVERHEAD ADJUSTMENT. R&R THE COOLANT AND TOP ENGINE FRAME. R&R THE VALVE COVER. INSTALL THE ENGINE TURNING TOOL. CHECKED THE OVERHEAD ADJUSTMENT. FOUND ALL CYLINDERS BUT 1 WERE EXTRMELY LOOSE. RESET THE OVERHEAD. REINSTALLED ALL COMPONENTS. RAN UNIT, NOISE WAS GONE. RAN UNIT FOR 1 HOUR TO DO AN INTIAL BREAK IN AND CHECK FOR LEAKS AND PROPER OPERATION. HOOK UNIT UP THE THE DYNO AND PERFORM THE BREAK IN PROCEDURE FOR 1 HOUR. TOPPED OFF ALL FLUIDS. PUT THE DYNO AWAY. REINSTALLED THE HOOD AND TOOK UNIT TO THE WASHBAY.

Labor:

Description	Amount
Labor	\$14,170.20
Total Labor	\$14,170.20

Parts:

Qty	Vendor	Part Number	Description	Bin	Price	Ext. Price
1.00	CAS	SGENG1	KIT	W-17-01-02	\$17.52	\$17.52
5.00	IMP	90924	1/4 DOT BRAKE TUBING	C-04-08-01	\$0.61	\$3.05
5.00	CAS	B96025	CE GRAY, AEROSOL	DISPLAY51	\$13.29	\$66.43
1.00	CAS	5802193161	COVER ASSY	W-03-03-05	\$6.10	\$6.10
1.00	CAS	17292281	O-RING	BORING	\$13.17	\$13.17
1.00	CAS	J918190	WASHER	V14-7	\$3.25	\$3.25
1.00	CAS	5167640	SEALING WASHE	V14-7	\$2.80	\$2.80
1.00	CAS	504042516	O-RING	BORING	\$17.52	\$17.52
1.00	CAS	87742605	HUDRAULIC PUMP	GASKET	\$21.98	\$21.98
1.00	CAS	17281381	O-RING	V14-14	\$0.55	\$0.55
1.00	CAS	87105748	CABLE, BLOCK HEATER	W-03-02-04	\$35.54	\$35.54
1.00	CAS	87413582	HEATER, BLOCK	W-14-01-05	\$142.32	\$142.32
1.00	CAS	76082618	BLOCK		\$8.76	\$8.76
1.00	CAS	367658A1	PLATE, CLAMP COVER		\$4.98	\$4.98
5.00	CAS	504023286	CLIP	V7-4	\$3.25	\$16.25
1.00	CAS	90416432	BELT	WW-04	\$33.11	\$33.11
2.00	CAS	16104411	NUT,SELF-LOCK	V6-4	\$1.83	\$3.67
2.00	CAS	9992298	O-RING	ORING	\$0.52	\$1.04
1.00	CAS	9992069	PKG-O-RING	ORING	\$0.31	\$0.31
1.00	NAV	FLTEC50VBS	CLAMP	W-13-01-07	\$40.07	\$40.07
1.00	CAS	47368257	GASKET, 6.0, EXHAUST	GASKET	\$18.49	\$18.49
10.00	TTM	METRIC	METRIC 10.9 HARDWARE 1/10 LB	HARDWARE	\$0.42	\$4.20
2.00	CAS	87356545	FILTER, AIR	C-04-08-02	\$156.98	\$313.95

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2.00	CAS	87356547	FILTER, AIR	C-02-01-02	\$117.00	\$234.00
9.00	CAS	73344237	LUBRICANT	BULKOIL	\$15.52	\$139.70
3.00	CAS	364357C2	HOSE, 25' BULK SOLD BY FT.	U-02-08-04	\$3.43	\$10.30
7.00	CAS	73344303	ANTIFREEZE	C-04-05-01	\$18.02	\$126.13
1.00	CAS	84423586	FILTER, FUEL	C-01-01-01	\$204.75	\$204.75
1.00	CAS	47934774	SPRING CLAMP	W-01-01-07	\$17.74	\$17.75
1.00	CAS	47936692	COOLANT	U-03-02-04	\$16.26	\$16.26
1.00	CAS	47934773	SPRING CLAMP	W-01-01-06	\$17.95	\$17.95
1.00	CAS	86528579	NUT, LOCK	V6-4	\$0.52	\$0.52
1.00	CAS	5801908571R	REMAN ENGINE		\$54,420.99	\$54,420.99
-1.00	CAS	5801908571C	CORE ENGINE	CORE	\$3,500.00	(\$3,500.00)
1.00	CAS	5801516883	FILTER, ELEMENT	C-01-03-01	\$120.84	\$120.84
1.00	CAS	5801486599R	REMAN-FUEL I	V15-TOP	\$3,598.08	\$3,598.08
1.00	CAS	504387088	SEAL	W-15-10-05	\$28.86	\$28.86
1.00	CAS	84423586	FILTER, FUEL	C-01-01-01	\$209.62	\$209.63
-1.00	CAS	5801486599C	FUEL INJECTION PUMP	CORE	\$250.00	(\$250.00)
Total Parts						\$56,170.82
Tax						\$0.00
Total WO						\$70,341.02

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