



901 West 94th Street  
Minneapolis MN 55420-4236



Minnesota 800-352-2812  
Iowa 800-342-7002  
Missouri 800-342-7002  
Wisconsin 800-342-7002

## Service Invoice

Invoice SI000039711  
Date 6/22/2021  
Call Number SC00059281  
Location Minneapolis  
Page 1 / 3

Sold to: CITY OF MINNETONKA  
14600 MINNETONKA BLVD  
MINNETONKA, MN 55345-1502

Invoice Account	Payment	Due Date
6067300	AR - Net 10th of the Following Month	7/10/2021

Customer PO	Customer EQ	Model	Serial Number	Equipment ID	Segment SMU
		PM200	P1C00458	P1364	1,765

### SC00059281-002 Troubleshoot - Engine

Customer complaint: Machines gauges are pegged out and engine is running rough.  
Machines location is 11522 Minnetonka Blvd, Hopkins, MN 55305.  
Resultant damage: Machine was running rough which made it inoperable.  
Cause of failure: Engine ECM lost its memory of its FLS & FTS settings.  
Repair process comments: Arrived at machine and verified complaint VIA Et with and Active code  
268- 2 Programmed Parameter Fault : Erratic, Intermittent, or Incorrect FLS / FTS  
Tried to reprogram the ECM which I was unable to.  
Verified machine had good battery power and battery cables were secured.  
Inspected harnessing to verify there was not a short that caused the loss of memory.  
Found harness was good and it was getting good power.  
Determined it to be a bad ECM so I went to St. Paul to pick up ECM.  
Replaced on another segment.

Quantity	Type	Part Number	Description	Unit Price	Amount
	Labor		Labor		504.00

Credit card payments are only accepted at Point of Sale  
A service charge of 1 1/2% per month will be assessed on all past due accounts.

CITY OF MINNETONKA  
14600 MINNETONKA BLVD  
MINNETONKA, MN 55345-1502

Invoice SI000039711  
Date 6/22/2021  
Account 6067300

Please Remit to:

Ziegler Inc.  
SDS 12-0436  
PO BOX 86  
MINNEAPOLIS, MN 55486-0436

Amount Due:

**\$3,261.24**

Amount Enclosed:

Invoice	Date	Call Number	Location	Page
SI000039711	6/22/2021	SC00059281	Minneapolis	2 / 3

Labor: 504.00

Segment Subtotal: 504.00

Customer PO	Customer EQ	Model	Serial Number	Equipment ID	Segment SMU
		PM200	P1C00458	P1364	1,765

### SC00059281-001 Replace - Engine - Control Module

Customer complaint: Engine ECM failed.  
Resultant damage: Machine was inoperable.  
Cause of failure: Memory loss in ECM.  
Repair process comments: Disconnected harness's from ECM.  
Disconnected fuel lines and removed ECM.  
Reinstalled in reverse order.  
Flashed ECM with software 325-3635.  
Put in a ticket 358538 to verify FLS should be set to 31 and FTS should be set to 0.  
Also i had trouble obtaining the injector trim files through sis but eventually was able to obtain them.  
Installed all 6 injector trim files.  
Came back the following day to time the engine which consisted of setting engine to TDC, installing timing probe through the block, and connecting ET to time engine.  
Ran machine for 30 minutes and all was sounding as it should and gauges were functioning properly.  
Returned machine to service.

Also placed a note on machine informing customer due to the engine ECM replacement the hours are now 0.

So they will have to add 1765 hours to the current machine hours to get the true machine hours.

Quantity	Type	Part Number	Description	Unit Price	Amount
1.00	Parts	10R5648	Control Gp	1,476.71	1,476.71
1.00	Parts	10R5648CC	Control Gp - Core Ch	482.59	482.59
-1.00	Parts	10R5648WC	Control Gp - Worn Co	482.59	-482.59
	Labor		Labor		530.00

Parts: 1,476.71

Labor: 530.00

Segment Subtotal: 2,006.71

Customer PO	Customer EQ	Model	Serial Number	Equipment ID	Segment SMU
		PM200	P1C00458	P1364	1,765

### SC00059281-004 Deliver - Parts Only

Quantity	Type	Part Number	Description	Unit Price	Amount
	Labor		Labor		97.00

Labor: 97.00

Segment Subtotal: 97.00

Customer PO	Customer EQ	Model	Serial Number	Equipment ID	Segment SMU
		PM200	P1C00458	P1364	1,765

SC00059281-003 Travel To/From - Machine

Quantity	Type	Part Number	Description	Unit Price	Amount
	Labor		Labor		472.00
60.00	Misc	MIL	TRAVEL MILEAGE	2.25	135.00
			Labor: 472.00	Misc: 135.00	Segment Subtotal: 607.00

Subtotal	3,214.71
Shop Supplies and Environmental Fees	46.53
Sales Tax	0.00
Total	\$ 3,261.24