

TITAN MACHINERY

ORDER NO SO0197413	DATE 07/28/2025
PAYMENT TERMS Cash On Delivery	

TITAN MACHINERY-WINDSOR
7250 GREENRIDGE RD
WINDSOR CO 80550-8000

CUSTOMER NO
CUSTOMER PO Engine Swap

SERVICE PREVIEW (PROFORMA)

INVOICE TO:

WORK SITE:

TITAN MACHINERY-WINDSOR
7250 GREENRIDGE RD
WINDSOR CO 80550-8000

SALESPERSON : NEEFE, EDWARD

SERVICE ORDER : SO0197413

CONTACT :

REF :

CASE IH MODEL:340 TRACT2 S/N: ZCRD08475 CUST UNIT: UNIT:E00626125

METER: 3,558.00

SEGMENT: 1 Remove and replace engine assembly CE LABOR

SEGMENT TYPE: Chargeable

CASE IH MODEL:340 TRACT2 S/N:ZCRD08475 CUST UNIT: UNIT:E00626125

WORK SITE: TITAN MACHINERY-WINDSOR 7250 GREENRIDGE RD WINDSOR CO 80550-8000

METER: 3,558.00

WORK DESCRIPTION:

Remove and Replace Engine

CORRECTION:

removed outer front tires, used Crain to remove the hood.
drained engine oil and coolant from engine.
recovered refrigerant from ac system.
disconnected the engine to trans drive shaft.
removed intake tubing and removed the exhaust pipes from turbo.
removed radiator hoses, disconnected fuel lines, ac and coolant lines.
removed ground straps.
used hoist to remove engine from tractor.
placed engine on stands,
before removing the flywheel found and marked holes for timing engine during reassemble. removed flywheel. removed rear engine cover, removed oil pan, removed cylinder head. removed valve cover, removed fuel rail, fuel lines and injectors.
took head to the machine shop to be resurfaced.
the machine shop wanted to replace the valves, springs and seals.
had seals, spring and valves replaced.
Installed head onto block and torqued new head bolts to the factory spec.
installed cam, cam caps.
installed 2-piece oil pan gasket and oil pan.
installed rear cover.
used special tool to center the bracket for idle gears.
installed front pulley and harmonic balancer.
installed alternator, ac compressor idlers and tensioner.
installed drive belts.
Installed rear cover of engine,
installed flywheel with timing marks.
set cam gear in time with flywheel.
set valve clearance.
installed valve cover.
installed fuel rail and injectors with new o-rings and sealing washers.
installed ecm.
installed fuel injection pump.
used hoist to install engine into tractor frame.
reinstalled exhaust, intake, drive shaft, fuel lines, ac lines coolant lines.
when attempting to fill the fuel lines with electric fuel pump it was not building enough pressure to push fuel through fuel system.
unit needed new electric fuel pump.
installed new fuel pump and was able to fill and bleed the fuel system.
filled engine with new 15-40, new coolant,
Charged ac system with 4 lbs of r134.

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installed front outer tires,
installed hood.
test drove unit.
unit working as intended at this time.

COVERAGE:

Billable

Hours: 3558

ITEM/Lot ID	DESCRIPTION	QTY	B/O	PRICE	CORE	TOTAL
TPAGE0118T	KIT FIP	1	0	900.00	0.01	900.01
51491235	KIT FIP	1	0	396.00	0.01	396.01
8094257R	REMAN-SHORT ENGINE	1	0	12,320.00	400.00	12,720.00
5801659560	OIL SEPARATOR	1	0	123.00		123.00
504125778	BUSHING	7	0	21.40		149.80
5801663519	GASKET	24	0	5.90		141.60
92039410	FILTER FUEL	1	0	100.75		100.75
84565867	FILTER ENGINE OIL	1	0	165.80		165.80
14463481	O-RING	6	0	14.80		88.80
5802246378	WASHER	4	0	2.40		9.60
5802246378	WASHER	2	0	2.40		4.80
42559144	O-RING	1	0	13.05		13.05
5802740762	BELLOWS	1	0	56.30		56.30
99440118	RING	1	0	40.30		40.30
504047548	CLAMP	2	0	69.65		139.30
5801389774	COOLER OIL	1	0	351.95		351.95
98499819	COTTER ROCKER A	50	0	1.80		90.00
504125776	SPRING, VALVE	24	0	10.90		261.60
504368419	STD EXHAUST VALV	12	0	147.30		1,767.60
500354685	VALVE,ENGINE,IN	12	0	63.35		760.20
MC37460	ADHESIVE RTV BLACK	1	0	5.11		5.11
MC38655	515 GASKET MAKER	1	0	12.48		12.48
5802054076	GASKET	1	0	202.70		202.70

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5802130987	GASKET	1	0	254.75	254.75
504375264	GASKET	1	0	17.10	17.10
504096443	THERMOSTAT	1	0	120.10	120.10
84256500	BLOCK HEATER	1	0	153.95	153.95
84349222	GASKET	1	0	12.85	12.85
H313	HOSE	3	0	4.56	13.68
73344234	NO.1 15W40 5 GAL	1	0	107.50	107.50
9827059	O-RING	1	0	1.95	1.95
73344304	ACTIFUL OAT PREMIX 2.5 GAL	3	0	42.85	128.55
87676818	PUMP FUEL	1	0	1,345.00	1,345.00
84191182	FILTER AIR - PRIMARY	1	0	237.70	237.70
87356547	FILTER AIR - SECONDARY	1	0	148.35	148.35
8094257C	REMAN-SHORT ENGINE	-1	0	400.00	-400.00
	LABOR CHARGE				25,896.25
	SHOP SUPPLIES				178.50
	FREIGHT & HANDLING				301.67
	CYLINDER HEAD REPAIR				1,111.80

SEGMENT 1 TOTAL:

20,642.24 PARTS 25,896.25 LABOR 1,591.97 MISC. 0.00 TAX 48,130.46 TOTAL

SEGMENT: 2 Hydraulic leak around transmission by tank CE LABOR

SEGMENT TYPE: Chargeable

CASE IH MODEL:340 TRACT2 S/N:ZCRD08475 CUST UNIT: UNIT:E00626125

WORK SITE: TITAN MACHINERY-WINDSOR 7250 GREENRIDGE RD WINDSOR CO 80550-8000

METER: 3,558.00

WORK DESCRIPTION:

Hydraulic leak near transmission by tank

CORRECTION:

found hydraulic oil leaking from left side of trans around the fuel tank.
washed unit in wash bay to remove old oil and dirt.
test drove unit.
found oil leaking from solenoid block on side of trans.
need to drain and remove the fuel and Def tanks to access block.

Repair was not made due to extensive hours to perform repair.

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SERVICE PREVIEW (PROFORMA)

ITEM/Lot ID	DESCRIPTION	QTY	B/O	PRICE	CORE	TOTAL
	LABOR CHARGE					368.78

SEGMENT 2 TOTAL:

0.00 PARTS 368.78 LABOR 0.00 MISC. 0.00 TAX 368.78 TOTAL

SEGMENT: 3 DEF Module / Fuel Tank sending unit CE LABOR

SEGMENT TYPE: Chargeable

CASE IH MODEL:340 TRACT2 S/N:ZCRD08475 CUST UNIT: UNIT:E00626125

WORK SITE: TITAN MACHINERY-WINDSOR 7250 GREENRIDGE RD WINDSOR CO 80550-8000

METER: 3,558.00

WORK DESCRIPTION:

DEF Module

Fuel Sending Unit

CORRECTION:

unit would set scr fault and go into limp mode.
found code being set for low Def pressure.
did a circulation test with the scan tool and the spikes in the pressure did not match the sample.
did a dosing test to check the Def injector spray pattern.
it sprayed with correct pattern.
need to replace the Def module.
removed and replaced the Def module.
performed the same tests as before but now unit passes and the graph matches.
erased codes and did a test drive.
unit did not set any codes.
Fuel gauge is not working
Replaced Fuel gauge sending unit
Fuel gauge is now working correctly

COVERAGE:

Hours: 3558

ITEM/Lot ID	DESCRIPTION	QTY	B/O	PRICE	CORE	TOTAL
84246892R	REMAN-MODULE DEF	1	0	2,152.20	100.00	2,252.20
47416695	SENDER UNIT	1	0	375.90		375.90
	LABOR CHARGE					1,761.93

SEGMENT 3 TOTAL:

2,628.10 PARTS 1,761.93 LABOR 0.00 MISC. 0.00 TAX 4,390.03 TOTAL

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SERVICE PREVIEW
(PROFORMA)

	Non Chargeable	Chargeable
PARTS	0.00	23,270.34
LABOR	0.00	28,026.96
MISC.	0.00	1,591.97
SALES TAX	0.00	0.00
INVOICE TOTAL	0.00	52,889.27
BALANCE AMOUNT	0.00	52889.27