

790 Eng



**KIBBLE
EQUIPMENT**

Kibble Equipment LLC
1051 Old Hwy 169 Blvd
Belle Plaine, MN 56011
Phone: 952-873-2224
www.kibbleeq.com



JOHN DEERE

Invoice To Account No: 4

SERVICE INVOICE

WARRANTY CUSTOMER
John Deere Warranty

Bus Phone:
Prv Phone:

Invoice Number: **4003669**

Invoice Date: 10/16/2023

Location: 92

Work Order Number: 737458

Payment Type: Account

Page: 1 of 9

Deliver To:

OTTO FARM
14740 CO RD 51
NORWOOD MN 55368

Bus Phone: 6125979650
Prv Phone:

Make/Model:

Meter

Serial Number:

EQ Id:

Fleet No:

JOHN DEERE S790

1136

1H0S790SAJ0800621

AJ0800621

Service Reminders:

Kibble//Warr Warranty

COMPLAINT:

01 Warranty work order.

CAUSE:

CORRECTION:

Labor: \$0.00

Parts: \$0.00

OL&M: \$0.00

Misc: \$0.00

Sub-Total: \$0.00

//WAR-2 Warranty

COMPLAINT:

02 Warranty
- coolant leak

CAUSE:

- cylinder liners were not shimmed properly allowing liners to move and leak

CORRECTION:

Key Part# (Failure Part - that caused failure) RE570135 is in the over haul kit
Tech# T80657
Failure Mode (Pick one that best describes failure): Leaked



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JOHN DEERE S790	1136	1H0S790SAJ0800621	AJ0800621	

Service Reminders:

DTAC Solution:

DTAC Case:

Labor Breakdown: (total hours of segment)

Diagnostic: 3 hrs

Repair: 67.75 hrs

Clean-up:

Travel (if applicable):

CORRECTION:

Adam G

- drove to customers location
- installed pressure tester on coolant system
- looked over machine for a coolant leak
- saw no visual leaks
- checked the engine oil level and it was over full and creamy looking
- drained oil
- removed filler neck and plugs on the oil pan
- used a camera and looked inside the engine
- saw coolant dripping from the rods
- this means the liners are leaking coolant into the oil pan
- filled engine with oil again
- had combine delivered to the shop
- drained coolant
- drained engine oil
- removed air filter assembly
- removed air cleaned inlet aspirator assembly
- removed all tin work around the engine compartment to gain access to the engine
- unhooked all wiring going to the engine
- unhooked all coolant line and hoses
- removed all belts on front of engine



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Serial Number:

EQ Id:

Fleet No:

JOHN DEERE S790

1136

1H0S790SAJ0800621

AJ0800621

Service Reminders:

- removed radiator shroud
- removed cooling fan, drive pulley and support shaft
- removed alternator assembly from side of engine
- removed exhaust pipe from turbo
- installed lifting brackets
- removed all mounting hardware
- removed engine from combine
- installed engine onto stand
- removed engine wire harness
- removed egr valve and egr piping and mixing tube
- removed intake horn
- removed intake manifold
- removed all fuel lines
- removed fuel pump from rear of the head
- removed both turbos
- removed thermostat housing cover
- removed thermostat housing and the tubes that go to the head
- removed exhaust manifold and mounting studs
- removed valve covers
- unhooked injector harness
- removed spacer box
- removed rocker arm assembly
- removed injectors
- removed front engine cover
- removed camshaft gear
- removed cover behind gear
- removed camshaft from engine
- unbolted the head
- installed lifting device and removed head
- cleaned block deck
- measured all liner heights
- all liners were below spec
- removed oil pan
- removed oil pump
- removed all pistons



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JOHN DEERE S790

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1H0S790SAJ0800621

AJ0800621

Service Reminders:

- removed liners
- found liners were worn and would not seal if used again
- removed egr cooler
- removed oil filter
- removed engine oil cooler and mounting assembly
- removed water pump
- removed idler gears from front gear train
- unbolted front cover and removed it from engine
- removed drive coupler from flywheel
- removed flywheel
- removed rear seal assembly
- unbolted crankshaft main bolts and removed main caps
- removed crankshaft from engine
- cleaned all block mounting surfaces
- pressure washed block clean
- pressure washed crankshaft clean
- installed crankshaft with new bearings
- installed main caps with new mounting hardware torquing them to spec
- installed new liner assemblies into the block with no o-rings
- measured the height
- they were low
- installed shim under liners and they were in spec
- removed liners and installed connecting rods and o-rings
- installed liners into block
- installed new rod bearings and connecting rod bolts, torqued to spec
- disassembled oil pump
- inspected oil pump and cleaned all parts
- pump looked good
- assembled pump and installed onto engine
- cleaned oil pan and installed it onto engine
- cleaned oil cooler base and installed it onto engine
- installed new cooler onto engine old one was contaminated with bad oil
- installed front cover onto engine
- installed water pump
- installed idler gears



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Service Reminders:

- cleaned all mounting surfaces on the head
- had head checked for cracks and surfaces deck to make sure it was flat
- removed camshaft bushings as the book described then installed new ones
- removed injector cups
- cleaned mounting holes
- installed new cups
- installed head onto block
- installed new head bolts and the 2 sealed ones
- torqued head into place
- installed camshaft
- installed cam drive gear
- cleaned injectors
- installed new o-rings and seals onto injectors then installed them into head
- torqued injectors into place
- disassembled rocker arm assembly
- cleaned contaminated oil out of shaft and off arms
- assembled rocker shafts
- installed rocker arm assembly onto engine and torqued into place
- adjusted lower idler gear back lash and torqued in place
- adjusted upper idler gear back lash and torqued in place
- torqued cam drive gear in place
- adjusted all valves and injector preloads
- installed spacer box and hooked up injector harness
- installed rocker covers
- installed front engine cover
- installed new front seal
- installed dampener and drive pulley
- installed new rear seal housing and rear seal
- installed flywheel and drive coupler
- installed all removed items on the outside of the engine
- installed lifting brackets and removed from engine stand
- installed engine into machine
- hooked up removed items
- filled with new oil and replaced oil filter
- filled with new coolant



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Service Reminders:

- bleed fuel system
- got engine running
- washed off engine
- took out and test drove for an hour to start breaking process
- looked over and saw no leaks and coolant system was full

PartNumber	Description	Quantity	List Price	Net Price	Extended Price	Taxed Ind
14M7298	FLANGE NUT	8.00	0.95	0.95	\$7.60	N
19M8883	Screw	4.00	1.98	1.98	\$7.92	N
A4730R	O-RING	2.00	2.21	2.21	\$4.42	N
AXE11579	GASKET	1.00	97.68	97.68	\$97.68	N
DE32663	Seal	1.00	110.32	110.32	\$110.32	N
DZ100355	HOUSING	1.00	144.41	144.41	\$144.41	N
DZ112021	ENGINE OVE	1.00	8,067.84	8,067.84	\$8,067.84	N
DZ114164	O-RING	2.00	21.30	21.30	\$42.60	N
DZ114918	BEARING KI	6.00	67.30	67.30	\$403.80	N
IPSKIT1	Oil Scan Test Kit	1.00	16.23	16.23	\$16.23	N
R116911	CAP SCREW	12.00	5.05	5.05	\$60.60	N
R28776	O-RING	2.00	1.86	1.86	\$3.72	N
R522023	GASKET	1.00	36.63	36.63	\$36.63	N
R529574	Cap Screw	3.00	5.86	5.86	\$17.58	N
R535114	SHIM	6.00	6.93	6.93	\$41.58	N
RE289839	CLAMP	1.00	46.76	46.76	\$46.76	N
RE537634	SENSOR	1.00	33.59	33.59	\$33.59	N
RE541424	BOLT KIT	1.00	351.80	351.80	\$351.80	N
RE544847	OIL COOLER	1.00	923.82	923.82	\$923.82	N



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Make/Model:	Meter	Serial Number:	EQ Id:	Fleet No:
JOHN DEERE S790	1136	1H0S790SAJ0800621	AJ0800621	

Service Reminders:

RE572785	Engine Oil Filter 13.6L	1.00	81.59	81.59	\$81.59	N
TY26573	1g COOL-GARD II Concentrate	2.00	28.60	28.60	\$57.20	N
TY26661	1g Break-In Plus Oil 10W30	3.00	29.89	29.89	\$89.67	N
TY26663	5g Break-In Plus Oil 10W30	2.00	130.97	130.97	\$261.94	N
TY27530S	Qt Shop COOLGARD II (4)	65.00	4.35	4.35	\$282.75	N

Labor: \$12,591.76 Parts: \$11,192.05 OL&M: \$0.00 Misc: \$0.00 Sub-Total: \$23,783.81

//WAR-3 Warranty

COMPLAINT:

03 Warranty
Leaking gearcase seal

CAUSE:

- seal did not seal properly

CORRECTION:

Key Part# (Failure Part - that caused failure) DE32663
Tech# T80657
Failure Mode (Pick one that best describes failure): Leaked

DTAC Solution:
DTAC Case:

Labor Breakdown: (total hours of segment)
Diagnostic: .25 hr



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Prv Phone:

Make/Model:	Meter	Serial Number:	EQ Id:	Fleet No:
JOHN DEERE S790	1136	1H0S790SAJ0800621	AJ0800621	

Service Reminders:

Repair: 1 hr

Clean-up: .5 hr

Travel (if applicable):

CORRECTION:

Adam G

- after engine was removed found bell housing was full of oil
- looked over where the oil was coming from
- found it was leaking out seal input shaft seal
- removed mounting bolts from cover
- removed seal from cover
- cleaned all mounting surfaces
- installed new seal into cover
- got install sleeve and put it on the input shaft
- installed cover with new mounting gasket
- torqued cover in place
- removed install sleeve

<u>PartNumber</u>	<u>Description</u>	<u>Quantity</u>	<u>List Price</u>	<u>Net Price</u>	<u>Extended Price</u>	<u>Taxed Ind</u>
CE20231	GASKET	1.00	29.27	29.27	\$29.27	N
DE32663	Seal	1.00	111.10	111.10	\$111.10	N
Labor: \$282.01		Parts: \$140.37		OL&M: \$0.00	Misc: \$0.00	Sub-Total: \$422.38



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Make/Model:

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Serial Number:

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Fleet No:

JOHN DEERE S790

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1H0S790SAJ0800621

AJ0800621

Service Reminders:

Labor: \$12,873.77

Parts: \$11,332.42

OL&M: \$0.00

Misc: \$0.00

Sales Tax: \$0.00

Total: \$24,206.19

TERMS AND CONDITIONS

Received by:

Date:

790 Trans



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JOHN DEERE

Invoice To Account No: 8508106

SERVICE INVOICE

OTTO FARM
DENNIS OTTO
14740 CO RD 51
NORWOOD MN 55368

Bus Phone: 6125979650

Prv Phone:

Invoice Number: **4049535**

Invoice Date: 11/10/2023

Location: 92

Work Order Number: 752487

Payment Type: Finance

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Bus Phone: 6125979650

Prv Phone:

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JOHN DEERE S790	1136	1H0S790SAJ0800621	AJ0800621	
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Service Reminders:

Kibble//Repair Retail

COMPLAINT:

01 Customer requested repair work order:

CAUSE:

CORRECTION:

Labor: \$0.00	Parts: \$0.00	OL&M: \$0.00	Misc: \$0.00	Sub-Total: \$0.00
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Gen3- Retail

COMPLAINT:

03 General Repairs
Hydro issue - won't move

CAUSE:

CORRECTION:

Adam B,
- Drained all hydraulic oil
- Removed all necessary hoses and lines to remove hydro pump and hydraulic pump
- Removed hydraulic pump and hydro pump
- Removed front hydro motor lines
- Removed front hydro motor
- Flushed out every line that deals with hydrostatic system to flush out debris
- Removed necessary shielding from engine compartment to remove hydraulic oil cooler



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Service Reminders:

- Removed fan shroud to access cooler
- Removed hydraulic cooler
- Replaced hydraulic oil cooler
- Flushed out hydraulic tank
- Changed hydraulic oil filter
- Swapped all fittings and sensors from hydro pump and motor to new pump and motor
- Installed pump and motor in reverse order
- Washed oil mess off of combine
- Drove combine around awhile to heat oil up for calibrating
- Calibrated new pump and motor

PartNumber	Description	Quantity	List Price	Net Price	Extended Price	Taxed Ind
A52523	Ring	1.00	13.95	12.56	\$12.56	N
AXE12964	HYDRAULIC FILTER	1.00	95.62	86.06	\$86.06	N
AXE43128	PRESSURE S	1.00	162.76	146.48	\$146.48	N
AXE47200	OIL COOLER	1.00	4,397.43	3,957.69	\$3,957.69	N
PG203344	Hydraulic Motor Reman, has core \$	1.00	9,450.69	8,505.62	\$8,505.62	N
PG203344-CR	CORE for:Hydraulic Motor Reman	-1.00	2,000.00	1,800.00	-\$1,800.00	N
R529640	GASKET	2.00	39.83	35.85	\$71.70	N
RE540348	CLAMP	2.00	65.71	59.14	\$118.28	N
RM100133	HYDRAULIC	1.00	7,952.99	7,157.69	\$7,157.69	N
T20779	RING	1.00	6.60	5.94	\$5.94	N
T42302	O-RING	1.00	3.86	3.47	\$3.47	N
T56238	O-RING	1.00	6.79	6.11	\$6.11	N
T78313	O-RING	1.00	5.47	4.92	\$4.92	N
T78393	O-RING	4.00	5.92	5.33	\$21.32	N
TY26625S	Qt Shop HY-GARD (\$/qt) (4)	92.00	4.72	4.25	\$391.00	N
Miscellaneous	Description	Quantity	List Price	Net Price	Extended Price	Taxed Ind



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Prv Phone:

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JOHN DEERE S790 1136 1H0S790SAJ0800621 AJ0800621

Service Reminders:

FREIGHT	FREIGHT	1.00	210.50	210.50	\$210.50	N
FREIGHT	FREIGHT	1.00	345.50	345.50	\$345.50	N

Labor: **\$6,175.00** Parts: **\$18,688.84** OL&M: **\$0.00** Misc: **\$556.00** Sub-Total: **\$25,419.84**

EXPERT-1000000153570 Retail

COMPLAINT:

04 Trucking

CAUSE:

10/31 BELLE PLAINE SERVICE

CORRECTION:

Load equipment onto trailer and secure.
Haul equipment to location and unload.
CUSTOMER TO STORE
NORWOOD TO BELLE PLAINE
HAULED BY JIM
11/02 44 M + LC

Miscellaneous	Description	Quantity	List Price	Net Price	Extended Price	Taxed Ind
TRUCK 439797 SALES	TRUCKING MILEAGE FOR 439797	1.00	395.00	395.00	\$395.00	N

Miscellaneous Charges:

SERVICE ACCESSORIES **\$125.00**

Labor: **\$0.00** Parts: **\$0.00** OL&M: **\$0.00** Misc: **\$520.00** Sub-Total: **\$520.00**



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Service Reminders:

Finance Information

Type: Farm Plan

Auth No: 969434

Merchant No: 44000529

Card No: xxxxxxxxxxxx3601

Bill Code: 705 - JD COMBINE PARTS/SERVICE

Credit Plan: 12040 - DEERE AG NO PAYMENTS/NO
INTEREST WAIVER UNTIL
NOVEMBER 15, 2024

Labor: \$6,175.00

Parts: \$18,688.84

OL&M: \$0.00

Misc: \$1,076.00

Sales Tax: \$0.00

Total: \$25,939.84

TERMS AND CONDITIONS

This purchase(s) is subject to the terms of the Multi-Use Account, a service of John Deere Financial, f.s.b. I grant the issuer a purchase money security interest, except as limited in that agreement, in the goods described.

Received by:

Date: