

**480E & 480ELL
Loader**

Parts Catalog

8-2821

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CASE CORPORATION
700 STATE STREET
RACINE, WI 53404 U.S.A.

CASE CANADA CORPORATION
3350 SOUTH SERVICE ROAD
BURLINGTON, ON L7N 3M6 CANADA

CASE

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480E and 480E LL Construction King
A170974 AIR CLEANER

REF.	PART NO.	DESCRIPTION	REQ'D.
	A170974	AIR CLEANER ASSEMBLY - engine	1
1	NSS	HOUSING - air cleaner.....	1
2	N6777	ELEMENT - secondary.....	1
3	N6778	ELEMENT - primary.....	1
4	D78354	NUT - wing, element retaining	2
5	N6779	COVER - end.....	1
6	S113982	DUST VALVE - rubber	1

FRONT GEAR COVER

4-390 Engine

REF.	PART NO.	DESCRIPTION	REQ'D.
1	J903794	COVER - gear, front.....	1
2	NSS	SEAL - oil, crankshaft front (Order Ref 30)	1
3	J914385	GASKET - front cover (Replaces J910500).....	1
4	J910411	HOUSING - timing gear	1
5	J916131	GASKET - gear housing (Replaces J907836).....	1
6	J900633	BOLT - hex, 8 mm - 1.25 x 50 mm	11
7	J900629	BOLT - hex, 8 mm - 1.25 x 16 mm	16
10	J900257	PIN - dowel, locating.....	2
11	J905933	HOUSING - timing pin (Replaces J903923).....	1
12	J914092	O-RING - pin housing (Replaces J906693)	1
13	J905595	GASKET - pin housing (Used with J903923 housing)	1
14	J907998	SCREW - round head, 5 mm - 0.8 x 17 mm	2
15	J903924	PIN - timing	1
16	J913994	O-RING - sealing(Replaces J903927)	1
17	J904849	RING - retaining,timing pin	1
18	J913192	GASKET - cover plate (Replaces A77441).....	1
19	J901249	BOLT - hex flange, 12 mm - 1.75 x 25 mm	2
20	J909918	PLATE - cover, access.....	1
23	J903463	COVER - access, front.....	1
26	J903475	SEAL - cover	1
30	J904353	SEAL KIT - oil, crankshaft front.....	1
31	NSS	SEAL - oil, crankshaft front	1
32	NSS	TOOL - seal installation.....	1
33	NSS	TOOL - seal installation.....	1
34	J912772	RETAINER - bolt.....	1
35	J901446	BOLT - hex flange, 8 mm - 1.25 x 60 mm	1

VALVE MECHANISM

4-390 Engine

REF.	PART NO.	DESCRIPTION	REQ'D.
	JR910275	HEAD - cylinder, remanufactured (North America only)	1
	JC905864	RETURN NUMBER - use this part number to return core for credit.....	1
	JC910275	RETURN NUMBER - use this part number to return head core for credit.....	1
1	J910275	HEAD ASSEMBLY - cylinder, new (With valves)	1
1	J913389	HEAD ASSEMBLY - cylinder (Without valves) (Replaces J909947)....	1
2	J902606	PLUG - expansion (21 mm) OD.....	3
3	J909403	SLEEVE - cylinder head (Engine serial No. 44112116 and after) ...	1
4	A77429	PLUG - hex socket pipe, 1/4-18 inch PT.....	5
5	J906619	PLUG - hex socket pipe, 1/8-27 inch PT.....	2
7	J900250	KEEPER - valve.....	16
8	J900299	RETAINER - valve spring	8
9	J900276	SPRING - valve.....	8
10	J901097	SEAL - valve.....	8
11	J901117	VALVE - intake.....	4
12	J901607	VALVE - exhaust.....	4
13	J909944	SLEEVE - salvage, 18 mm (Prior to Engine Serial No. 44112116).....	1
15	J906854	SEAT - insert, intake valve (Service repair only)	4
16	J904105	SEAT - insert, exhaust valve (Service repair only).....	4
17	J904408	GUIDE - valve, intake (Service repair only)	4
18	J904409	GUIDE - valve, exhaust (Service repair only)	4
19	J906206	GUIDE - valve, intake and exhaust 11 mm OD (Service repair only)	12
20	J903938	BOLT - hex flange head, 12 mm - 1.75 x 70 mm.....	4
20	J903939	BOLT - hex flange head, 12 mm - 1.75 x 120 mm.....	10
21	J910814	SUPPORT AND SHAFT ASSEMBLY - rocker arm.....	4
22	J907555	PLUG - rocker arm shaft.....	1
23	J900242	RING - retaining, rocker arm.....	8
24	J900245	WASHER - thrust, rocker arm.....	8
25	J910811	ARM ASSEMBLY - rocker, intake	4
26	NSS	INSERT - rocker arm	1
27	J900706	SCREW - slotted set adjusting, 3/8 inch NF x 40 mm.....	1
28	A77558	NUT - hex jam, 3/8 inch NF.....	1
30	J910810	ARM ASSEMBLY - rocker, exhaust.....	4
31	NSS	INSERT - rocker arm	1
32	J900706	SCREW - slotted set adjusting, 3/8 inch NF x 40 mm.....	1
33	A77558	NUT - hex jam, 3/8 inch NF.....	1
35	813-8075	BOLT - hex, 8 mm - 1.25 x 75 mm	4
36	J903940	BOLT - hex flange head, 12 mm - 1.75 x 180 mm.....	4
38	J904679	ROD - push, rocker arm	8
40	J907240	TAPPET - valve, push rod.....	8

FLYWHEEL AND HOUSING

4-390 Engine

REF.	PART NO.	DESCRIPTION	REQ'D.
1	J903287	HOUSING - flywheel.....	1
2	J912473	O-RING - housing to block (Replaces A157927).....	1
3	J910540	BOLT - hex flange, 12 mm - 1.75 x 40 mm (Replaces J901408).....	8
4	J908095	PLATE - cover.....	1
5	J902735	BOLT - hex, flange, self tapping, 8 mm - 1.25 x 21 mm.....	2
8	J910248	PLUG - housing (Replaces J908001).....	1
9	253070R1	O-RING - plug, flywheel housing (Replaces J904469).....	1
10	J910684	FLYWHEEL ASSEMBLY - crankshaft.....	1
11	J901774	GEAR - flywheel.....	1
13	J900269	WASHER - flat, flywheel bolt.....	8
14	J901395	BOLT - hex head, 12 mm - 1.25 x 32 mm.....	8
15	353-225	PLUG - hex head, 3/4 inch NF.....	1

480E and 480E LL Construction King
THROTTLE CONTROL LINKAGE

REF.	PART NO.	DESCRIPTION	REQ'D.
1	A37247	KNOB - hand throttle, 1/2 inch ID, used with D76429 lever	1
1A	D86694	KNOB - hand throttle, 5/8 inch ID, used with D135055 lever	1
2	D76429	CONTROL LEVER - hand throttle, 1/2 inch OD at knob, no longer available, order D135055 lever and D86694 knob for service.....	1
2A	D135055	CONTROL LEVER - hand throttle, 5/8 inch OD at knob.....	1
3	113-422	BOLT - hex, 1/2 NC x 2-1/2 inch	1
4	195-533	WASHER - flat, 17/32 x 1-1/16 x 5/64 inch	1
5	131-10	NUT - hex, self-locking, 1/2 inch NC	2
6	A34113	SPRING - detent.....	1
7	D139323	DISC - friction.....	1
8	D66096	PLATE - throttle linkage	1
9	113-4	BOLT - hex, 1/4 NC x 1 inch	1
10	425-104	NUT - hex, 1/4 inch NC	1
11	D71880	CLAMP - throttle linkage	2
12	138-150	ROLL PIN - 5/16" x 13/16"	2
13	D71815	RETAINER - control lever	1
13A	138-128	ROLL PIN - 1/4" x 5/8"	1
14	D71820	SHAFT - throttle.....	1
15	D66655	SLEEVE - throttle.....	1
16	141-53	CLEVIS PIN - rod ends	2
17	141-60	CLEVIS PIN - throttle control rod	1
18	195-521	WASHER - flat, 11/32 x 11/16 x 3/64 inch	1
19	132-24	COTTER PIN - 3/32" x 1/2"	3
20	D68266	ROD - throttle.....	1
21	129-122	NUT - hex, 5/16 inch NF	2
22	H44198	CLEVIS - rod end, plated	2
23	D75201	SHAFT - throttle.....	1
24	113-206	BOLT - hex, 3/8 NC x 3/4 inch	2
25	492-11038	WASHER - lock, 3/8 inch	2
26	D68186	CLEVIS - special male	1
27	H44198	CLEVIS - female, plated.....	1
28	141-53	CLEVIS PIN - at pedal and shaft	2
29	132-24	COTTER PIN - 3/32" x 1/2"	2

Continued on next page

FUEL INJECTION NOZZLE

4-390 Engine

REF.	PART NO.	DESCRIPTION	REQ'D.
	JR914472	NOZZLE ASSEMBLY - injection, Remanufactured (North America only)	1
	JC914472	RETURN NUMBER - injector (Use this number to return injector core for credit).....	1
	AR77553	KIT - injection nozzle, remanufactured (North America only)	4
	A77553	KIT - injection nozzle, new	4
1	J903380	SEAL - connector	4
2	J914472	NOZZLE ASSEMBLY - fuel injection, (New)(Order A77553 kit) (Replaces J909475 and J911340)	4
3	J903927	O-RING - sealing	4
4	J900808	SEAL - injector (See Note)	4
6	NSS	BODY ASSEMBLY - injector (Order A77553 kit)	1
7	J905152	SPRING - nozzle pressure.....	1
8	J905153	SEAT - nozzle pressure spring.....	1
9	J905154	STOP ASSEMBLY - nozzle valve.....	1
10	NSS	TIP ASSEMBLY - nozzle injector (Order A77553 kit)	1
11	A48201	NUT - cap, nozzle tip.....	1
	A48186	SHIM KIT - nozzle opening pressure	1
12	1806233C1	SHIM - nozzle, 1.00 mm (5 in kit).....	UAR
12	1806234C1	SHIM - nozzle, 1.04 mm (5 in kit).....	UAR
12	1806235C1	SHIM - nozzle, 1.08 mm (5 in kit).....	UAR
12	1806236C1	SHIM - nozzle, 1.10 mm (5 in kit).....	UAR
12	1806237C1	SHIM - nozzle, 1.14 mm (5 in kit).....	UAR
12	1806238C1	SHIM - nozzle, 1.18 mm (5 in kit).....	UAR
12	1806239C1	SHIM - nozzle, 1.20 mm (5 in kit).....	UAR
12	1806240C1	SHIM - nozzle, 1.24 mm (5 in kit).....	UAR
12	1806241C1	SHIM - nozzle, 1.28 mm (5 in kit).....	UAR
12	1806242C1	SHIM - nozzle, 1.30 mm (5 in kit).....	UAR
12	1806243C1	SHIM - nozzle, 1.34 mm (5 in kit).....	UAR
12	1806244C1	SHIM - nozzle, 1.38 mm (5 in kit).....	UAR
12	1806245C1	SHIM - nozzle, 1.40 mm (5 in kit).....	UAR
12	1806246C1	SHIM - nozzle, 1.44 mm (5 in kit).....	UAR
12	1806247C1	SHIM - nozzle, 1.48 mm (5 in kit).....	UAR
12	1806248C1	SHIM - nozzle, 1.50 mm (5 in kit).....	UAR
12	1806249C1	SHIM - nozzle, 1.54 mm (5 in kit).....	UAR
12	1806250C1	SHIM - nozzle, 1.58 mm (5 in kit).....	UAR
12	1806251C1	SHIM - nozzle, 1.60 mm (5 in kit).....	UAR
12	1806252C1	SHIM - nozzle, 1.64 mm (5 in kit).....	UAR
12	1806253C1	SHIM - nozzle, 1.68 mm (5 in kit).....	UAR
12	1806254C1	SHIM - nozzle, 1.70 mm (5 in kit).....	UAR
12	1806255C1	SHIM - nozzle, 1.74 mm (5 in kit).....	UAR
12	1806256C1	SHIM - nozzle, 1.78 mm (5 in kit).....	UAR
12	1806257C1	SHIM - nozzle, 1.80 mm (5 in kit).....	UAR
12	1806258C1	SHIM - nozzle, 1.84 mm (5 in kit).....	UAR
12	1806259C1	SHIM - nozzle, 1.88 mm (5 in kit).....	UAR
12	1806260C1	SHIM - nozzle, 1.90 mm (5 in kit).....	UAR
12	1806261C1	SHIM - nozzle, 1.94 mm (5 in kit).....	UAR
12	1806262C1	SHIM - nozzle, 1.98 mm (5 in kit).....	UAR

NOTE: Whenever a nozzle is removed from the cylinder head, J900808 gasket must be replaced before nozzle is installed in cylinder head.

**480E and 480E LL Construction King
STARTER AND ALTERNATOR MOUNTING**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	REF	STARTER ASSEMBLY - engine, parts list pages 4-5 and 4-7	1
2	-814-10040	BOLT - hex, 10 mm - 1.5 x 40 mm	2
3	892-1110	WASHER - lock, 10 mm.....	2
4	J903099	DRIVE BELT - alternator and fan	1
5	REF	ALTERNATOR ASSEMBLY - electrical, parts list page 4-3.....	1
6	814-10100	BOLT - hex, 10 mm - 1.5 x 100 mm	1
7	892-1110	WASHER - lock, 10 mm.....	1
8	J902469	SPACER - alternator.....	1
9	814-8025	BOLT - hex, 8 mm - 1.25 x 25 mm	1
10	192-20	WASHER - lock, 5/16 inch.....	1
11	J903089	BRACE - alternator mounting	1
12	614-8020	BOLT - hex, 8 mm - 1.25 x 20 mm	1

**480E and 480E LL Construction King
MAIN WIRING HARNESS AND CONNECTIONS**

4-19

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D134640	HARNESS - main	1
2	D95781	KNOB - switch.....	1
3	D74330	SWITCH - lamp	1
4	N7557	NUT - special, 3/8" - 24 NF, switch retaining.....	1
	D134737	SWITCH ASSEMBLY - ignition.....	1
5	NSS	KEY SWITCH - without keys.....	1
6	A77314	NUT - mounting.....	1
7	A77313	KEY - ignition, set of two.....	1
8	193-108	WASHER - internal tooth lock, 1"	1
9	195-2105	WASHER - flat, 1", special.....	1
10	L71879	DIODE - alternator protecting	2
11	D133074	WIRE - ground, ignition switch	1
12	D133075	WIRE - ground.....	1
13	D134659	BRACKET - relay mounting.....	1
14	D75355	BRACKET - circuit breaker.....	1
15	113-3	BOLT - hex, 1/4 NC x 3/4 inch	4
16	195-102	WASHER - flat, 5/16 x 3/4 x 1/16 inch	4
17	193-1006	NUT AND LOCK WASHER - 1/4" - 20 NC, plated.....	4
18	D123827	RETAINER - threaded insert, replace with 193-1000 locknut	3
19	182-145	MACHINE SCREW - pan head slotted, No. 10 - 32 NF x 1/2".....	3
20	D128310	RELAY - 30 amperes	2-3
21	D78001	CIRCUIT BREAKER - 10 amperes.....	1
22	D78002	CIRCUIT BREAKER - 15 amperes.....	1-5
23	A145925	GROMMET - harness, fuel gauge sender wire	1
24	F5450	GROMMET - at air cleaner bracket, main harness to filter.....	1
25	L18337	STRAP - nylon retaining.....	2
26	49858	CLAMP - medium closed, 3/4 inch diameter	1
27	193-1000	NUT ASSEMBLY - includes lock washer, No. 10 NF.....	3
28	*REF	TRIM - edge, 2-1/4" (57 mm) long, cut from F42827, see below	1
	*F42827	TRIM - edge, 116" (2946 mm) long	UAR

NOTE: For additional switches and switch wiring, see page 4-31.

**480E and 480E LL Construction King
POWER SHUTTLE ELECTRICAL CIRCUIT**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D135612	SWITCH - clutch cutout, floor plate mounted, order D103504 kit below.....	1
2	D126116	WASHER - special, if used	1-2
3	D99204	HARNESS - clutch cutout, lower	1
4	D141486	SWITCH - clutch cutout, loader control lever, if used.....	1
5	D138252	BOOT - switch cover, if used	1
6	D99751	HARNESS - control lever switch, if used.....	1
7	L18337	STRAP - nylon retaining	UAR
8	D83832	GROMMET - wire, if used.....	1
9	D99203	HARNESS - clutch cutout, upper, if used	1
10	D67251	SWITCH - clutch cutout, instrument panel, includes hardware, if used.....	1
11	D73929	PLATE - instrument panel switch, if used.....	1
12	L71879	DIODE - switch.....	1
13	A166057	SENDER - shuttle oil temperature	1
14	193-1000	NUT ASSEMBLY - includes lock washer, No. 10 NF.....	1
15	*D134742	SOLENOID - clutch cutout, at power shuttle, used with D136020 or D135731 shuttle	1
16	D88053	SLEEVE - solenoid wires.....	1
	D103504	KIT - switch, clutch cutout	1
17	413-516	BOLT - hex, 5/16 NC x 1 inch.....	2
18	492-11031	WASHER - lock, 5/16 inch	2
	D142143	SWITCH ASSEMBLY - clutch cutout, with bracket	1
19	D142142	BRACKET - switch mounting.....	1
20	D141581	ROD - switch activating	1
21	138-61	PIN - roll, 1/8" x 1".....	1
22	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch.....	1
23	T34088	SPRING - return, switch rod	1
24	D137363	SWITCH - clutch cutout.....	1
25	182-530	SCREW - machine, pan head, No.6 NC x 1-1/4 inch.....	2
26	195-507	WASHER - flat, No. 6	2
27	193-1003	NUT ASSEMBLY - includes lock washer, No. 10 NF.....	2

***NOTE:** See page 6-19 for solenoid used with D140175, D140405, or D140492 shuttle.

480E and 480E LL Construction King
TRACTOR LAMP ELECTRICAL CIRCUIT
WITH CAB

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D88547	LAMP ASSEMBLY - front, interchangeable with A59701 lamp.....	2
2	A25213	RETAINER - lamp, locks to shell with three rubber tabs, if used	1
2A	N6160	RETAINER - lamp, locks over shell flange, if used	1
3	A11280	BULB - sealed beam, No. 4411.....	1
4	A59702	WASHER - retainer.....	2
5	193-87	WASHER - internal-external tooth lock, 1/2 inch.....	2
6	425-108	NUT - hex, 1/2 inch NC	2
7	353-700	GROMMET - rubber.....	2
8	F44608	HARNESS - cab.....	1
9	F44338	CHANNEL - lower front, harness.....	1
10	F44337	CHANNEL - upper front, harness.....	1
11	187-1046	SCREW - self-tapping, 3/8" - 16 NC x 5/8", plated	4
12	F44339	CHANNEL - upper, wire.....	2
13	F44407	CLIP - wire.....	10
14	R37316	WIRE - to left-hand front lamp.....	1
15	R37315	WIRE - to front windshield wiper	1
16	49859	CLAMP - harness, used instrument panel mounting hardware	1
17	49859	CLAMP - harness, used channel mounting hardware	1
18	R37440	COVER - harness wire, to rear windshield wiper, insert under glass molding	1
19	D134927	SUPPORT - bracket mounting, right-hand	1
20	D134928	SUPPORT - bracket mounting, left-hand.....	1
21	113-206	BOLT - hex, 3/8 NC x 3/4 inch	2
22	113-207	BOLT - hex, 3/8 NC x 1 inch	2
23	492-11038	WASHER - lock, 3/8 inch.....	4
24	129-103	NUT - hex, 3/8 inch NC	4
25	D88684	LAMP ASSEMBLY - rear flood, parts list page 4-45.....	2
26	D121152	LAMP ASSEMBLY - stop and tail, parts list page 4-41	2
27	187-1917	SCREW - pan head, self-tapping, No. 8 x 5/8", plated	4
28	195-510	WASHER - plain, 3/16 x 7/16 inch.....	4

Continued on next page

480E and 480E LL Construction King
HORN

4-47

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D123205	HORN - 12 volt.....	1
2	L30866	NUT - hex, horn mounting, 7/8" - 20 NC	1
3	D122734	BRACKET - horn mounting, fastens to transmission support strap, for attaching hardware see page 6-47	1
4	L18337	STRAP - nylon retaining	UAR
5	D67872	SWITCH - horn	1
6	163-15	MACHINE SCREW - hex head, No. 10 - 24 NC x 5/8", plated	2
7	193-1004	NUT ASSEMBLY - includes lock washer, No. 10 NC.....	2
8	D78002	CIRCUIT BREAKER - 15 amperes	1
9	D75818	WIRE - circuit breaker to horn switch and horn	1
10	D91176	WIRE - horn to switch wire	1

DIPPER LAMP

USED WITH NON-EXTENDABLE DIPPER
480E MODELS ONLY

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D75761	WIRE ASSEMBLY - to dipper lamp switch	1
2	D74330	SWITCH - lamp	1
3	N7557	NUT - special, 3/4" - 24 NF	1
4	D95783	KNOB - dipper lamp switch	1
5	D50717	WIRE - dipper lamp	1
6	49853	CLAMP - harness	3
7	L18337	STRAP - nylon retaining	6
8	49853	CLAMP - harness	1
9	D41427	SHIELD - lamp	1
10	131-1116	NUT - hex, self-locking, 1/2 inch NC	1
11	195-533	WASHER - flat, 17/32 x 1-1/16 x 5/64 inch	1
12	193-87	WASHER - internal-external tooth lock, 1/2 inch	1
	D37811	LAMP ASSEMBLY - dipper arm	1
13	NSS	BODY - lamp	1
14	182-82	MACHINE SCREW - pan head slotted, No. 8 - 32 NC x 1/4"	2
15	193-25	WASHER - internal tooth lock, No. 8	2
16	10927	SPRING - lamp	1
17	B50293	INSULATOR - lamp	1
18	A25262	WIRE - lamp	1
19	A42294	LAMP - No. 4406	1
20	D31441	RETAINER - lamp	1
21	D56849	BRACKET - shield mounting	2
22	D33265	BLOCK - tapped	4
23	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	9
24	492-11038	WASHER - lock, 3/8 inch	4
25	113-207	BOLT - hex, 3/8 NC x 1 inch	9
26	131-52	NUT - hex, self-locking, 3/8 inch NC	5

**480E and 480E LL Construction King
STEERING HYDRAULIC CIRCUIT
STEERING CONTROL VALVE TO CYLINDERS**

5-7

REF.	PART NO.	DESCRIPTION	REQ'D.
1	REF	CONTROL VALVE - steering, for correct assembly and components, see pages 5-9 and 5-11	1
2	218-5059	ADAPTER - straight, 3/4-16 inch flare x O-ring boss	2
3	237-6008	O-RING - 41/64 ID x 3/32 inch wide	1
4	D138103	TUBE - to right-hand steering cylinder	1
5	D138104	TUBE - to left-hand steering cylinder	1
6	D62390	HOSE - 20" (508 mm) long, to steering cylinders	2
7	218-5182	TEE - adjustable.....	2
8	237-6006	O-RING - 15/32 ID x 5/64 inch wide	1
9	D126884	HOSE - 15" (382 mm) long, between cylinders, two wheel drive models only	2
10	218-5057	CONNECTOR - short, 9/16-18 flared x 9/16-18 inch o-ring boss	2
11	237-6006	O-RING - 15/32 ID x 5/64 inch wide	1
12	D128454	CYLINDER ASSEMBLY - steering, two wheel drive models only, parts list page 5-13	2
12A	195-108	WASHER - flat, 11/16 x 1-3/4 x 5/32 inch	UAR
13	129-610	NUT - hex, slotted, 5/8" - 18 NF, plated	4
14	132-335	PIN - cotter, 1/8 x 1-1/4 inch	4
15	D68638	CLAMP - tube.....	4
16	D67296	INSULATOR - tube clamp.....	4
17	113-207	BOLT - hex, 3/8 NC x 1 inch	1
17A	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch	1
18	113-206	BOLT - hex, 3/8 NC x 3/4 inch	2
19	492-11038	WASHER - lock, 3/8 inch	4
20	129-103	NUT - hex, 3/8 inch NC	2
21	25-226	NUT - square, 3/8 inch NC	2
22	49851	CLAMP - retaining	1

SPECIAL PARTS USED ON FOUR WHEEL DRIVE MODELS

23	D92099	CYLINDER ASSEMBLY - steering, parts list page 5-13	2
24	D123917	HOSE - 25-5/8" (650 mm) long, cylinder to cylinder	2
25	L18337	STRAP - nylon retaining	1
26	L17508	CLAMP - hose	1
27	218-5243	TEE - adjustable, right-hand steering cylinder	1
28	237-6006	O-RING - 15/32 ID x 5/64 inch wide	1
29	218-5135	ELBOW - 45 degree, adjustable, left-hand steering cylinder.....	1
30	237-6006	O-RING - 15/32 ID x 5/64 inch wide	1
31	218-5105	ELBOW - 90 degree, adjustable, right-hand steering cylinder	1
32	237-6006	O-RING - 15/32 ID x 5/64 inch wide	1
33	D34666	WASHER - flat, 3/4", hardened, at inner ball joints.....	2

**480E and 480E LL Construction King
FRONT AXLE AND SPINDLES
P.I.N. 17003108 AND AFTER**

5-17

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D125862	SPINDLE - right-hand.....	1
2	D125863	SPINDLE - left-hand.....	1
3	D137317	AXLE ASSEMBLY - front.....	1
4	D126498	BUSHING - axle.....	1
5	D50146	BUSHING - axle.....	1
	D103156	KIT - kingpin, front axle.....	2
6	219-89	GREASE FITTING - 45 degree, 1/8" NPT.....	2
7	D72337	KINGPIN - front axle.....	1
8	A28230	NEEDLE BEARING - kingpin.....	2
9	A27463	SNAP RING - bearing retaining.....	2
10	D72371	SPACER - kingpin.....	2
11	A27602	ROLLER BEARING - spindle.....	1
12	D72372	THRUST WASHER - bearing.....	1
13	A23904	O-RING - 2-3/16 ID x 3/32 inch.....	2
14	D61297	SEAL - oil.....	1
15	D57486	PIN - kingpin lock.....	1
16	492-11050	WASHER - lock, 1/2 inch.....	2
17	129-125	NUT - hex, 1/2 inch NF.....	2
18	D64171	PIN - axle pivot.....	1
19	D25280	RING - snap.....	2
20	195-2152	WASHER - flat, 1-25/32 x 2-1/2 x 7/64 inch.....	2
21	D61076	WASHER - spacer.....	UAR
22	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long.....	1
23	132-335	PIN - cotter, 1/8 x 1-1/4 inch.....	2
24	129-610	NUT - hex, slotted, 5/8" - 18 NF, plated.....	2
25	195-2084	WASHER - flat, 3/4", special.....	UAR
	D73398	TIE ROD ASSEMBLY - tractor.....	1
26	D88491	BALLJOINT - tie rod, right-hand.....	1
27	D88492	BALLJOINT - tie rod, left-hand.....	1
28	N7681	BOOT - dust, D88491 or D88492 ball joint.....	1
29	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long.....	1
30	D73397	TIE ROD - tractor.....	1
31	D73799	CLAMP - tie rod, includes hardware.....	2

**480E and 480E LL Construction King
TORQUE CONVERTER AND HOUSING**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D48445	HOUSING - torque converter.....	1
2	814-10030	BOLT - hex, 10 mm - 1.5 x 30 mm.....	11
3	814-10035	BOLT - hex, 10 mm - 1.5 x 35 mm.....	1
4	892-1110	WASHER - lock, 10 mm.....	12
5	D81693	TORQUE CONVERTER - transmission.....	1
6	D131147	PLATE - torque converter, hardened.....	1
7	121-103	BOLT - special, 5/16" - 18 NC x 5/8".....	6
8	A15672	WASHER - flat, hardened.....	6
9	D81592	PLATE - torque converter drive.....	1
10	121-203	BOLT - special, 3/8" - 24 NF x 1/2".....	6
11	D128411	SPACER - torque converter, 3/32" thick, no longer used, order D135817 spacer.....	1
11	D135817	SPACER - torque converter, 9/16" thick.....	1

POWER SHUTTLE

PINION CAGE, OUTPUT SHAFT, AND CONTROL VALVE

REF.	PART NO. REF	DESCRIPTION	REQ'D.
		POWER SHUTTLE ASSEMBLY - see page 6-13 for service information, parts list pages 6-13 through 6-23	1
1	*D50055	THRUST WASHER - clutch hub	1
2	D70665	PINION CAGE AND OUTPUT SHAFT - power shuttle.....	1
3	NSS	CAGE AND SHAFT - basic.....	1
4	H747964	NEEDLE BEARING - output shaft, (in D103218 kit below).....	1
	D50030	KIT - inner pinion gear and shaft	3
5	NSS	PINION GEAR - inner.....	1
6	NSS	PINION SHAFT - inner	1
7	NSS	PIN - retaining	1
8	NSS	SPACER - pinion bearing	3
9	NSS	ROLLER - pinion bearing.....	48
10	NSS	PLATE - thrust.....	2
	D50031	KIT - outer pinion gear and shaft.....	3
11	NSS	PINION GEAR - outer.....	1
12	NSS	PINION SHAFT - outer.....	1
13	NSS	PIN - retaining	1
14	NSS	SPACER - pinion bearing	3
15	NSS	ROLLER - pinion bearing.....	48
16	NSS	PLATE - thrust.....	2
17	*D50087	RING - collector.....	1
18	*D50080	RING - sealing.....	2
19	D50056	BAFFLE - plate	1
20	D50057	SPACER - ball bearing.....	1
21	40011	BALL BEARING - output shaft, (in D103218 kit below).....	1
22	*D50058	GASKET - ball bearing retainer.....	1
23	D50059	RETAINER - rear ball bearing	1
24	192-22	WASHER - lock, 7/16 inch	6
25	113-363	BOLT - hex, 7/16 NC x 1-1/8 inch	6
26	*D50060	SEAL - oil, rear	1
27	D124144	YOKE - output shaft mounting.....	1
28	*D65247	WASHER - output shaft.....	1
	345-84	SEALANT - 3 oz. (89 ml) of sealer in a tube, not shown, used between D65247 washer and end of shaft.....	1
29	131-91	NUT - hex, self-locking, 3/4" - 16 NF, special.....	1
	D103218	KIT - bearing, includes one each of the following bearings; R21491 page 6-13, 40011 and H747964 page 6-15, D50044 page 6-21 ...	1
	*D103220	KIT - seal and gasket, includes numbers preceded by an asterisk above and noted parts on pages 6-13 and 6-17 through 6-23.....	1

Continued on next page

POWER SHUTTLE CONTROL LEVER AND LINKAGE

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D86694	KNOB - power shuttle control.....	1
2	D76132	ROD - power shuttle	1
3	D86946	CONTROL LEVER - shuttle, upper	1
4	138-2053	SPIROL PIN - 1/4" x 1-1/4", heavy duty	1
5	D125772	SPRING - detent.....	1
6	163-28	MACHINE SCREW - hex washer head, No. 8 - 32 NC x 1/4"	1
7	D140551	BRACKET - detent	1
	D81756	COLLAR ASSEMBLY - bearing.....	1
8	NSS	COLLAR - bearing.....	1
9	178-888	SET SCREW - hex socket headless, 1/4" - 20 NC x 1/4", cup point.....	1
10	111-215	CARRIAGE BOLT - short neck, 5/16" - 18 NC x 3/4"	3
11	195-521	WASHER - flat, 11/32 x 11/16 x 3/64 inch	3
12	131-4	NUT - hex, self-locking, 5/16" - 18 NC.....	3
13	T53567	WASHER - hardened	UAR
14	D71880	CLAMP - control rod	2
15	138-150	ROLL PIN - 5/16" x 13/16".....	2
16	D71813	SLEEVE - shift lever	1
17	D71822	SHAFT - control.....	1
18	D69180	BALL JOINT - shift rod.....	2
19	492-11038	WASHER - lock, 3/8 inch.....	2
20	129-123	NUT - hex, 3/8 inch NF.....	4
21	D134132	ROD - shift	1
22	D67497	BRACKET - bellcrank.....	1
23	113-219	BOLT - hex, 3/8 NC x 2 inch	3
24	D76210	SPACER - shifting bracket.....	2
25	D76195	SPACER - bottom bolt	1
26	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	4
27	492-11038	WASHER - lock, 3/8 inch.....	3
28	129-103	NUT - hex, 3/8 inch NC	3
29	D67814	BELLCRANK - shuttle shifting.....	1
30	219-55	FITTING - grease, 90 degree, 1/8 inch	1
31	F41695	WASHER - flat, bellcrank	UAR
32	D95098	SNAP RING - retaining.....	1
33	D129385	ROD - to power shuttle.....	1
34	D63154	BALL JOINT - 1/4"	2
35	192-19	WASHER - lock, 1/4 inch.....	2
36	129-121	NUT - hex, 1/4 inch NF.....	4

**480E and 480E LL Construction King
FRONT DRIVE AXLE
TIE ROD AND SWIVEL HOUSING**

6-35

REF.	PART NO.	DESCRIPTION	REQ'D.
	D127440	AXLE ASSEMBLY - front drive, Carraro 710 No. 118562, parts list pages 6-33 through 6-43	1
1	N13615	TIE ROD - steering	1
	K260254	BALL JOINT - left-hand	1
2	NSS	BALL JOINT - left-hand	1
2A	NSS	BOOT - ball joint	1
2B	K956938	NUT - hex, slotted, ball joint	1
	K260250	BALL JOINT - right-hand	1
3	NSS	BALL JOINT - right-hand	1
3A	NSS	BOOT - ball joint	1
3B	K260251	NUT - hex, slotted, ball joint	1
4	N8904	CLAMP - tie rod	2
5	N8905	BOLT - hex head, special	2
6	K260157	NUT - hex, self-locking, special	2
7		RESERVED	
8	K260255	COTTER PIN - special	2
9	N13614	HOUSING - swivel, right-hand	1
10	N13613	HOUSING - swivel, left-hand	1
11	K262143	SEAL - oil, swivel housing	2
12	K395033	BUSHING - swivel housing	2
13	K395138	RING - sealing, swivel housing	2
14	K395032	BOLT - steering stop, special	4
15	K965369	NUT - hex, 12 mm, special	4
16	N13504	CAP - swivel housing	4
17	K965247	BOLT - hex head, 14 mm - 2 x 35 mm, special	12
18	K965248	WASHER - lock, 14 mm, special	12
19	K395036	SHIM - 0.10 mm thick, swivel cap	UAR
19	K395037	SHIM - 0.19 mm thick, swivel cap	UAR
19	K395038	SHIM - 0.35 mm thick, swivel cap	UAR
20	K395039	SEAL - bearing	4
21	K395040	ROLLER BEARING - swivel cap	4
22	K965246	GREASE FITTING - straight, swivel cap, upper	4

480E and 480E LL Construction King
FRONT DRIVE AXLE CONTROL

6-45

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D120758	HANDLE - T-grip	1
2	129-145	NUT - hex jam, 1/2 inch NC	1
3	D86664	BOOT - lever	1
4	D133525	LEVER - shift	1
5	219-57	FITTING - grease, 90 degree, 1/4 inch NF taper	1
6	D95097	RING - retaining	1
7	195-545	WASHER - flat, 13/16 x 1-15/32 x 1/8 inch	UAR
8	D138796	BRACKET - lever	1
9	492-11038	WASHER - lock, 3/8 inch	2
10	129-103	NUT - hex, 3/8 inch NC	2
11	D137489	ROD - shift	1
12	D133527	LEVER - pivot shift	1
13	141-54	PIN - clevis, 3/8 x 1-1/16 inch	2
14	132-320	PIN - cotter, 3/32 x 3/4 inch	3
15	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	1

TRANSAXLE

Shifter Mechanism

REF.	PART NO.	DESCRIPTION	REQ'D.
1	A138312	COVER - shift control.....	1
2	1981241C1	GASKET - cover to transmission housing (Replaces G10342)	1
3	138-245	PIN - roll, 1/2 x 7/8 inch.....	1
4	13-624	BOLT - hex, 3/8 NC x 1-1/2 inch	4
5	92-6	WASHER - lock, 3/8 inch.....	4
6	G15468	SCREW - set, 5/16 inch NC.....	1
7	25-145	NUT - hex jam lock, 5/16 inch NC	1
12	A138313	RAIL - shifter, first and second gear	1
13	A140578	RAIL - shifter, third and fourth gear.....	1
14	A51964	FORK ASSEMBLY - shift, first and second gear.....	1
15	A150726	FORK - shifter, third and fourth gear.....	1
16	138-2009	PIN - spirol, 3/16 x 1 inch	2
17	A29060	PLUG - interlock, shifter rails	1
18	211-28	BALL - detent, 13/32 inch diameter.....	2
19	G47039	SPRING - tension, detent ball.....	2
22	REF	LEVER ASSEMBLY - shift, transmission (See Page 6-47)	1
23	REF	BALL - lever (See Page 6-47)	1
24	REF	PIN - groove, lever ball (See Page 6-47).....	1
25	REF	CAP - dust (See Page 6-47).....	1
26	REF	RING - snap (See Page 6-47)	1
27	REF	SEAT - lever, shift (See Page 6-47).....	1
30	REF	KNOB - lever, shift (See Page 6-47)	1
31	REF	NUT - hex jam, 1/2 inch NC (See Page 6-47)	1

TRANSAXLE

Rear Axle

REF.	PART NO.	DESCRIPTION	REQ'D.
1	A153737	HOUSING - axle, right (Uses 5/8 inch bolts)	1
1	A153738	HOUSING - axle, left (Uses 5/8 inch bolts)	1
1	A182761	HOUSING - axle, right (Shown)(Uses 3/4 inch bolts)	1
1	A182762	HOUSING - axle, left (Uses 3/4 inch bolts)	1
2	G10347	O-RING - axle housing to transmission case	2
3	26-1032	BOLT - hex, 5/8 NC x 2 inch, Grade 8	2
3	26-1036	BOLT - hex, 5/8 NC x 2-1/4 inch, Grade 8	6
3	26-1064	BOLT - hex, 5/8 NC x 4 inch, Grade 8	2
3	26-1240	BOLT - hex, 3/4 NC x 2-1/2 inch, Grade 8	2
3	26-1244	BOLT - hex, 3/4 NC x 2-3/4 inch, Grade 8	4
3	166-137	BOLT - 12 point flanged, 3/4 NC x 2-3/4 inch, Grade 8	2
3	26-1272	BOLT - hex, 3/4 NC x 4-1/2 inch, Grade 8	2
4	192-25	WASHER - lock, 5/8 inch	10
4	92-12	WASHER - lock, 3/4 inch	10
5	219-36	FITTING - grease, 45 degree, 1/8 inch PT	2
6	G13801	SEAL - oil, inner, 2-1/4 inch ID	2
7	G13822	SEAL - oil, outer, 3 inch ID	2
8	A154936	SHAFT - rear axle	2
10	G15207	CONE - bearing, outer, 2-5/8 inch ID	2
11	G15208	CUP - bearing, outer, 4-11/32 inch OD	2
12	G10415	CUP - bearing, inner, 3-15/16 inch OD	2
13	L33289	CONE - bearing, inner, 2-1/4 inch ID	2
14	A154940	GEAR - final drive (Bull gear)(64 external, 17 internal teeth)	2
15	F62105	WASHER - take-up	2
16	A30075	NUT - hex slotted, 1/2 inch NF	1
17	132-352	PIN - cotter, 1/4 x 2-1/2 inch	2

ALPHABETICAL INDEX

BRAKES

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**480E and 480E LL Construction King
BRAKE PEDALS AND MOUNTING**

7-11

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D127611	BRACKET - brake pedal and master cylinder mounting	1
2	D67915	GROMMET - rubber	1
3	113-207	BOLT - hex, 3/8 NC x 1 inch	3
4	413-624	BOLT - hex, 3/8 NC x 1-1/2 inch, transaxle vent hose mounting, left-hand side only	1
5	492-11038	WASHER - lock, 3/8 inch	4
6	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	4
7	492-11038	WASHER - lock, 3/8 inch, upper left-hand mounting hole only, for transaxle vent hose mounting	1
8	129-103	NUT - hex, 3/8 inch NC, upper left-hand mounting hole only, for transaxle vent hose mounting	1
9	85-628	SET SCREW - square head, 3/8" - 16 NC x 1-3/4", cup point	1
10	129-103	NUT - hex, 3/8 inch NC	1
11	D84355	SHAFT - pedal	1
12	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch	1
13	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	1
14	131-52	NUT - hex, self-locking, 3/8 inch NC	1
15	195-2125	WASHER - pedal shaft	UAR
16	D89845	SPACER - pedal, outer	2
17	D94176	SPACER - pedal, center	1
18	D90654	PEDAL - brake, right-hand	1
19	D90751	PEDAL - brake, left-hand	1
20	219-31	GREASE FITTING - 30 degree, special short, 1/8" NPT	2
21	D127519	MASTER CYLINDER - brake, parts list page 7-17, see page 7-15 for the cover, gasket, and clamps	2
22	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch	6
23	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	2
24	492-11038	WASHER - lock, 3/8 inch	6
25	129-103	NUT - hex, 3/8 inch NC	6
26	D120218	ANCHOR - brake spring	2
27	D120911	SPRING - pedal return	2
28	D94105	CLEVIS - master cylinder	2
29	129-164	NUT - hex jam, 7/16 inch NF	2
30	141-64	CLEVIS PIN - 7/16", plated	2
31	132-26	PIN - cotter, 3/32 x 3/4 inch	2

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**480E and 480E LL Construction King
 LOADER LIFT CYLINDER HYDRAULIC CIRCUIT**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	G109859	CONTROL VALVE - loader, parts list page 8-67.....	1
2	218-5062	ADAPTER - straight, 7/8-14 inch flare x O-ring boss.....	4
3	237-6010	O-RING - 3/4 ID x 3/32 inch wide.....	1
4	D127096	TUBE - loader control valve to closed end of cylinders.....	1
4A	D74624	RESTRICTOR - tube to closed end of cylinder.....	1
5	D127094	TUBE - loader control valve to rod end of cylinders.....	1
6	218-595	TEE - right-hand to left-hand cylinders.....	2
7	D68600	TUBE - to left-hand cylinders.....	2
8	35646	HOSE - 22-3/4" (578 mm) long, to closed end of left-hand cylinder and rod end of right-hand cylinder.....	2
9	D38485	HOSE - 22-1/2" (572 mm) long, to rod end of left-hand cylinder.....	1
10	D27478	HOSE - 22" (559 mm) long, to closed end of right-hand cylinder.....	1
11	218-5107	ELBOW - 90 degree adjustable, 7/8-14 inch thread.....	2
12	237-6010	O-RING - 3/4 ID x 3/32 inch wide.....	1
13	D69415	TUBE - to rod end of lift cylinders.....	2
14	REF	CYLINDER ASSEMBLY- lift, right-hand, for correct assembly and components, see page 8-115, rotated 180 degrees P.I.N. 17001950 and after.....	1
15	REF	CYLINDER ASSEMBLY- lift, left-hand, for correct assembly and components see page 8-115.....	1
16	D72449	BRACKET - tube clamp.....	1
17	113-207	BOLT - hex, 3/8 NC x 1 inch.....	1
18	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch.....	1
19	492-11038	WASHER - lock, 3/8 inch.....	1
20	129-103	NUT - hex, 3/8 inch NC.....	1
21	D40236	CLAMP - tube.....	2
22	413-624	BOLT - hex, 3/8 NC x 1-1/2 inch.....	1
23	113-219	BOLT - hex, 3/8 NC x 2 inch.....	1
24	D76209	SPACER - tube clamp.....	1
25	D76210	SPACER - tube clamp.....	1
26	492-11038	WASHER - lock, 3/8 inch.....	2
27	129-103	NUT - hex, 3/8 inch NC.....	2
28	D38648	SPACER - tube clamp.....	2
29	214-264	CLAMP - hose.....	2

480E and 480E LL Construction King
BACKHOE BOOM CYLINDER HYDRAULIC CIRCUIT
12 FOOT AND 14 FOOT BACKHOES
480E MODELS ONLY

8-21

REF.	PART NO.	DESCRIPTION	REQ'D.
1	REF	CONTROL VALVE - backhoe, for correct assembly and components, see pages 8-75 and 8-77	1
2	413-828	BOLT - hex, 1/2 NC x 1-3/4 inch	3
3	492-11050	WASHER - lock, 1/2 inch	3
4	425-108	NUT - hex, 1/2 inch NC	3
5	218-5063	ADAPTER - straight, male, upper port	1
6	237-6012	O-RING - 59/64 ID x 7/8 inch wide	1
7	D87325	RESTRICTOR - lower port.....	1
8	D99170	ADAPTER - straight, male, lower port	1
9	237-6012	O-RING - 59/64 ID x 7/8 inch wide.....	1
10	D99120	TUBE - upper port, models with foot swing.....	1
11	D99122	TUBE - lower port, models with foot swing, not used on models with hydraulic boom lock, see page 8-43 for boom lock hydraulic lines.....	1
12	D99836	TUBE - upper port, models with hand swing.....	1
13	D99838	TUBE - lower port, models with hand swing.....	1
14	R22412	HOSE - 50" (1270 mm) long, to boom cylinder	2
15	D42833	CLAMP - hose.....	2
16	113-311	BOLT - hex, 7/16 NC x 1-1/2 inch	1
17	131-8	NUT - hex, self-locking, 7/16" - 14 NC.....	1
18	D99141	TUBE - to rod end of boom cylinder.....	1
19	D38648	SPACER - clamp.....	1
20	214-270	CLAMP - tube, 4-5/16 to 5-1/4 inch	1
21	218-5062	ADAPTER - straight, 7/8-14 inch flare x O-ring boss.....	2
22	237-6010	O-RING - 3/4 ID x 3/32 inch wide.....	1
23	G102835	CYLINDER ASSEMBLY - boom, parts list page 8-125	1

480E and 480E LL Construction King
BACKHOE BUCKET CYLINDER HYDRAULIC CIRCUIT
 MODELS WITHOUT EXTENDABLE DIPPER
 480E 14 FOOT BACKHOE MODELS ONLY

8-31

REF.	PART NO.	DESCRIPTION	REQ'D.
1	REF	CONTROL VALVE - backhoe, for correct assembly and components, see pages 8-75 and 8-77	1
2	413-828	BOLT - hex, 1/2 NC x 1-3/4 inch	3
3	492-11050	WASHER - lock, 1/2 inch	3
4	425-108	NUT - hex, 1/2 inch NC	3
5	218-5063	ADAPTER - valve ports	2
6	237-6012	O-RING - 59/64 ID x 7/8 inch wide	1
7	*D121618	HOSE - 51-3/16" (1300 mm) long, from upper valve port.....	1
8	*L53351	HOSE - 45" (1143 mm) long, from lower valve port.....	1
9	D99151	CLAMP - hose, includes two halves.....	1
10	D99822	GROMMET - hose.....	2
11	113-111	BOLT - hex, 5/16 NC x 2-1/2 inch	3
12	131-4	NUT - hex, self-locking, 5/16 inch NC.....	3
13	D42833	CLAMP - hose, at swing tower	2
14	113-219	BOLT - hex, 3/8 NC x 2 inch	1
15	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	1
16	R46103	SPACER - clamp.....	1
17	131-218	NUT - hex, self-locking, 3/8 inch NC.....	1
18	A13622	CLAMP - tube, at boom.....	2
19	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch	1
20	113-206	BOLT - hex, 3/8 NC x 3/4 inch	1
21	492-11038	WASHER - lock, 3/8 inch	2
22	D76209	SPACER - tube clamp, side of boom.....	1
22A	25-226	NUT - square, 3/8 inch NC.....	1
23	D133451	TUBE - right-hand	1
24	D128840	TUBE - left-hand	1

***NOTE:** D121618 hose (item 7) and L53351 hose (item 8) are switched around at hydraulic tubes (items 23 and 24) on models with hand swing.

Continued on next page

480E and 480E LL Construction King
BACKHOE EXTENDABLE DIPPER HYDRAULIC CIRCUIT
480E MODELS ONLY

8-41

REF.	PART NO.	DESCRIPTION	REQ'D.
26	218-5107	ELBOW - 90 degree adjustable, 7/8-14 inch thread.....	1
27	237-6010	O-RING - 3/4 ID x 3/32 inch wide.....	1
28	D54362	TUBE - to rod end of dipper extension cylinder	1
29	218-5062	ADAPTER - straight, 7/8-14 inch flare x O-ring boss.....	1
30	237-6010	O-RING - 3/4 ID x 3/32 inch wide.....	1
31	G101203	CYLINDER ASSEMBLY - dipper extension, parts list page 8-137	1
32	D99202	CLAMP - hose.....	1
33	113-206	BOLT - hex, 3/8 NC x 3/4 inch	1
34	492-11038	WASHER - lock, 3/8 inch.....	1
35	195-525	WASHER - flat, 3/8 inch, used on models with cage on boom for square nut.....	1
36	25-226	NUT - square, 3/8 inch, used on models with cage on boom for square nut.....	1

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**480E and 480E LL Construction King
PTO HYDRAULIC COOLING SYSTEM**

8-51

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D76097	COOLER - PTO hydraulic oil	1
2	D136774	BRACKET - cooler, left-hand side	1
3	814-8016	BOLT - hex, 8 - 1.25 x 16 mm.....	2
4	192-20	WASHER - lock, 5/16 inch.....	4
5	814-8025	BOLT - hex, 8 mm - 1.25 x 25 mm	2
6	R46103	SPACER - cooler.....	2
7	825-1108	NUT - hex, 8 mm - 1.25.....	2
8	D136775	BRACKET - cooler, right-hand side.....	1
9	814-8025	BOLT - hex, 8 - 1.25 x 25 mm.....	2
10	192-20	WASHER - lock, 5/16 inch.....	2
11	195-521	WASHER - flat, 11/32 x 11/16 x 3/64 inch	2
12	R46103	SPACER - cooler.....	2
13	814-8016	BOLT - hex, 8 - 1.25 x 16 mm.....	1
14	192-20	WASHER - lock, 5/16 inch.....	1
15	825-1108	NUT - hex, 8 mm - 1.25.....	1
16	D93351	STRIP - rubber, 1/4" (6 mm) x 2-3/8" (60 mm) x 12" (305 mm), cut to required width and length from D86157 bulk rubber strip.....	1
17	D55583	HOSE - 1/2" (13 mm) ID x 4" (102 mm) long, cut to required length from bulk hose S118388, see below, cooler tubes.....	2
18	214-253	CLAMP - hose retaining, NO. 10 type F	4
19	D136731	TUBE - from cooler upper tube	1
20	D136733	TUBE - to cooler lower tube	1
21	218-789	REDUCER - 5/8" x 1/2", tube	2
22	218-566	TEE - fitting.....	2
23	R24281	VALVE - check	1
24	D77945	TUBE - to filter.....	1
25	D72130	TUBE - return, from rear equipment hydraulic circuit	1
26	D132008	ELBOW - 90 degree, adjustable.....	1
27	218-5010	O-RING - 1-11/16 x 1-13/32 x 1/8 inch.....	1
28	221-849	PLUG - hex socket, 1/8 inch PT	2
	S118388	HOSE - bulk length, 1/2" (13 mm) ID x 168" (4267 mm) long.....	UAR
	D86157	STRIP - rubber, bulk, 1/4" (6 mm) x 4" (102 mm) x 23-1/4" (591 mm) long.....	UAR

**480E and 480E LL Construction King
PTO SHIELD AND SPEED INDICATOR**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D75219	SHIELD - PTO shaft	1
2	113-207	BOLT - hex, 3/8 NC x 1 inch	2
3	195-2028	WASHER - flat, 25/64 x 5/8 x 1/16 inch	2
4	492-11038	WASHER - lock, 3/8 inch	2
5	129-103	NUT - hex, 3/8 inch NC	2
6	D74799	SHIELD - sensor	1
7	113-102	BOLT - hex, 5/16 NC x 3/4 inch	2
8	192-20	WASHER - lock, 5/16 inch	2
9	425-105	NUT - hex, 5/16 inch NC	2
10	D74632	SPACER - disc	1
11	D74741	DISC - pickup	1
12	83-414	SET SCREW - hex socket, cup point, 1/4" - 20 NC x 7/8"	1
13	D75217	SENSOR - speed indicator, includes hardware	1
14	R29627	GUARD - rubber	1
15	D134596	HARNESS - wire	1
16	L18337	STRAP - nylon retaining	3
17	D75454	WIRE - tachometer harness to circuit breaker	1
18	49567	GROMMET - harness	1
19	D74877	WIRE - ground	1
20	D134595	GAUGE - PTO speed indicator, no longer available, order D139034 gauge for service	1
21	D139034	GAUGE - PTO speed indicator	1
22	D134617	BRACKET - gauge	1
23	195-521	WASHER - flat, 11/32 x 11/16 x 3/64 inch	1
24	192-20	WASHER - lock, 5/16 inch	1
25	425-105	NUT - hex, 5/16 inch NC	1
26	D74801	COVER - bracket	1
27	113-102	BOLT - hex, 5/16 NC x 3/4 inch	2
28	192-20	WASHER - lock, 5/16 inch	2
29	195-521	WASHER - flat, 11/32 x 11/16 x 3/64 inch	2

480E and 480E LL Construction King
CASE LOADER CONTROL VALVE - TWO SPOOL
LIFT SECTION

REF.	PART NO.	DESCRIPTION	REQ'D.
	G106336	SECTION ASSEMBLY - lift	1
1	NSS	HOUSING - section	1
2	NSS	SPOOL - section.....	1
3	G108461	O-RING - spool and housing	2
4	A32309	SEAL - spool	1
5	G102711	RETAINER - O-ring.....	1
6	G33075	SEAT - centering spring, upper, small.....	1
7	G106455	CENTERING SPRING - spool	1
8	G106395	SEAT - centering spring, lower, large	1
9	G106396	SHAFT - detent.....	1
10	G109127	WASHER - detent, ball retainer.....	1
11	211-258	BALL - steel, 9/32" diameter.....	8
12	G106398	RETAINER - ball stop.....	1
13	G109081	SPRING - detent.....	1
14	G106425	HOUSING - detent.....	1
15	G106454	PLUG - detent housing	1
16	G107780	VALVE -check, detent plug	1
17	G33081	POPPET - load check.....	2
18	G33573	SPRING - load check.....	2
19	G33084	PLUG - load check.....	2
20	G33686	O-RING - plug	2
	G33122	PLUG ASSEMBLY - load check valve port.....	2
21	NSS	PLUG - load check valve port.....	1
22	G107675	O-RING - 7/8 x 1-1/16 x 3/32 inch, small	1
23	237-6012	O-RING - 59/64 ID x 7/8 inch wide, large.....	1
24	G35540	RING - backup, small o-ring	1

480E and 480E LL Construction King
BACKHOE CONTROL VALVE
DIPPER AND BUCKET SECTION
480E MODELS ONLY

8-81

REF. - PART NO.	DESCRIPTION	REQ'D.
	G109513 SECTION ASSEMBLY - dipper and bucket.....	1
1	NSS BODY - section.....	1
2	NSS SPOOL - section.....	1
3	G108461 O-RING - body	2
4	A32309 SEAL - spool	1
5	G102711 RETAINER - O-ring.....	1
6	G34463 CENTERING SPRING - spool	1
7	G33075 SEAT - centering spring.....	2
8	G33077 SNAP RING - spool end.....	1
9	G33080 CAP - centering spring.....	1
10	G33081 POPPET - load check valve	2
11	G33573 SPRING - load check valve.....	2
12	G33084 PLUG - load check valve	2
13	G33686 O-RING - plug	2
	*G107786 CIRCUIT RELIEF VALVE ASSEMBLY - order G109449 kit below	2
14	NSS SEAT - circuit relief valve.....	1
15	G107675 O-RING - 7/8 x 1-1/16 x 3/32 inch, small, seat	1
16	G35540 RING - backup, small o-ring	1
17	NSS BODY - circuit relief valve.....	1
18	NSS POPPET - circuit relief valve.....	1
19	NSS O-RING - poppet.....	1
20	NSS PIN - relief stop.....	1
21	NSS SPRING - circuit relief valve, inner	1
22	NSS SPRING - circuit relief valve, outer.....	1
23	NSS PISTON - circuit relief valve.....	1
24	NSS O-RING - piston.....	1
25	178-890 SETSCREW - hex socket headless, 5/16 NF x 1 inch, oval point... 1	
26	129-162 NUT - hex, jam, 5/16 inch NF	1
27	237-6012 O-RING - 59/64 ID x 7/8 inch wide, large, body.....	1
	*G109449 KIT - service for G107786, includes G109447 relief valve assembly (items 14-27) and an instruction sheet	1

***NOTE:** The pressure setting of the repair circuit relief valve is not preset for this application. Adjust the setting according to the instructions sent with the repair valve and according to the service manual.

BOOM LOCK VALVE

480E MODELS ONLY

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D88644	VALVE ASSEMBLY - boom lock.....	1
2	NSS	BODY - valve.....	1
3	D56470	RELIEF VALVE ASSEMBLY - boom lock valve.....	1
4	F9857	O-RING - relief valve.....	1
5	D56469	BACKUP RING - inner O-ring.....	1
6	A7464	O-RING - inner.....	1
7	D56881	DOWEL PIN - handle.....	1
8	13-558	BOLT - hex head, 5/16" - 18 NC x 3-5/8".....	1
9	D56460	BUSHING - spacer.....	1
10	192-20	WASHER - lock, 5/16 inch.....	1
11	25-145	NUT - hex, jam, 5/16 inch NC.....	1
12	182-48	MACHINE SCREW - pan head slotted, No. 6 - 32 NC x 3/4".....	1
13	D56467	CLAMP - shaft retaining.....	1
14	131-150	NUT - hex, self-locking, No. 6 - 32 NC, plated.....	1
15	NSS	SHAFT - lock control.....	1
16	F62020	RING - snap, external, 1-5/32 inch.....	1
17	D56461	PLUG - plunger retainer.....	1
18	A35104	O-RING - plug.....	1
19	D56462	SPRING - poppet.....	1
20	D56464	POPPET - valve.....	1
21	D56463	SEAT - poppet.....	1
22	N13534	PLUNGER - valve.....	1
23	N8539	O-RING - 3/8 inch ID.....	1
24	L31330	BACKUP RING - seal.....	1
25	D89888	LEVER - boom lock valve.....	1
26	113-118	BOLT - hex, 5/16 NC x 5/8 inch.....	1
27	192-20	WASHER - lock, 5/16 inch.....	1

**480E and 480E LL Construction King
THREE-POINT HITCH CONTROL VALVE
INLET-OUTLET SECTION**

8-101

REF.	PART NO.	DESCRIPTION	REQ'D.
	D122551	SECTION ASSEMBLY - inlet-outlet, uses plug in place of main relief valve	1
1	NSS N7109	HOUSING - inlet-outlet section	1
		PLUG ASSEMBLY - section port.....	1
2	NSS	PLUG - section port.....	1
3	221-841	PLUG - hex socket head, 1/4 inch PT	1
4	237-6012 N7111	O-RING - 59/64 ID x 7/8 inch wide	1
		REGULATOR ASSEMBLY - flow control	1
5	D54188	KNOB - regulator assembly	1
6	NSS	SCREW - adjusting	1
7	D54290	O-RING - adjusting screw	1
8	S99877	BACKUP RING - O-ring.....	1
9	NSS	COVER - regulator.....	1
10	A16755	O-RING - cover	1
11	61-414	BOLT - hex socket head, 1/4" - 20 NC x 7/8"	4
12	192-19 N7110	WASHER - lock, 1/4 inch.....	4
		CONTROL ASSEMBLY - flow	1
13	L35302	SPRING - flow control.....	1
14	NSS	SLEEVE - piston	1
15	NSS	SHIM - sleeve	UAR
16	NSS	PISTON - flow control.....	1
17	L35301	COLLAR - metering sleeve.....	1
18	NSS	SLEEVE - metering	1
19	NSS	GUIDE - sleeve, flow control	1
20	L33213	O-RING - valve.....	1
21	L35297 D87301	BACKUP RING - O-ring.....	1
		PLUG ASSEMBLY - main relief port.....	1
22	NSS	PLUG - main relief port.....	1
23	343900R1	O-RING - plug, large	1
24	D39718	O-RING - plug, small.....	1
25	D87303	BACKUP RING - small O-ring	2

480E and 480E LL Construction King
D131293 HYDRAULIC OIL FILTER

8-111

REF.	PART NO.	DESCRIPTION	REQ'D.
	D131293	FILTER ASSEMBLY - hydraulic oil	1
1	NSS	HEAD - filter.....	1
	N6755	RESTRICTION INDICATOR ASSEMBLY - electric	1
	N6941	REPAIR KIT - restriction indicator.....	1
2	129-667	NUT - hex, No. 10 NF.....	2
3	193-99	WASHER - internal tooth lock, No. 10, plated	1
4	237-6006	O-RING - 15/32 ID x 5/64 inch wide, outer, large.....	1
5	A28090	O-RING - inner, small	1
6	NSS	RESTRICTION INDICATOR - electric.....	1
7	NSS	VALVE - bypass.....	1
	N9025	ELEMENT ASSEMBLY - filter replacement.....	1
8	NSS	ELEMENT - filter	1
9	N9026	O-RING - filter to head	1

480E and 480E LL Construction King
1340827C1 BACKHOE STABILIZER CYLINDER
480E MODELS ONLY

8-121

REF.	PART NO.	DESCRIPTION	REQ'D.
1	- 1340827C1	CYLINDER ASSEMBLY - 3-1/2" (89 mm) ID x 16-3/8" (416 mm) stroke, stabilizer.....	2
2	1340828C1	TUBE ASSEMBLY - cylinder.....	1
3	30613	BUSHING - tube.....	2
	G110607	GLAND ASSEMBLY - cylinder.....	1
4	NSS	GLAND - cylinder.....	1
6	*D95143	WIPER - piston rod, outer.....	1
7	*G102425	BUSHING - center.....	1
8	*G107922	U-CUP SEAL - piston rod, wide, with O-ring.....	1
8	G100777	U-CUP SEAL - piston rod, service option - severe heat or cold.....	1
8A	*G109094	SEAL - piston rod, narrow, with groove.....	1
9	*G46889	O-RING - gland.....	1
10	*D38858	BACKUP RING - gland O-ring.....	1
11	187-1524	SCREW - self-tapping, hex slotted, No. 8 NC x 3/8".....	1
12	1340831C1	ROD ASSEMBLY - piston, 1-3/4" (44 mm) diameter.....	1
14	G100698	PISTON - cylinder.....	1
15	*G102286	SEAL - piston.....	1
16	*G100710	BACKUP RING - piston seal.....	1
17	*G100711	RING - wear, piston.....	2
18	28-1640	BOLT - hex head, 1" - 14 NS x 2-1/2", grade 8.....	1
19	G32303	WASHER - hardened.....	1
20	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long.....	1
	*G110621	KIT - seal, includes all items with an asterisk.....	1

NOTE: The cylinder assembly part number is stamped on some cylinder glands or tubes.

480E and 480E LL Construction King
1980159C1 DIPPER CYLINDER
14 FOOT BACKHOE MODELS

8-131

REF.	PART NO.	DESCRIPTION	REQ'D.
	-1980159C1	CYLINDER ASSEMBLY - 3-3/4" (95 mm) ID x 33" (838 mm) stroke	
		backhoe dipper	1
1	1980176C1	TUBE ASSEMBLY - cylinder.....	1
	1980187C1	GLAND ASSEMBLY - cylinder.....	1
2	NSS	GLAND - cylinder.....	1
3	*D95144	WIPER - piston rod.....	1
4	*G101533	BUSHING - center	1
5	*G107923	SEAL - U-cup, piston rod, wide, with O-ring	1
5	G100778	SEAL - U-cup, piston rod, service option, severe heat or cold.....	1
5A	*G107997	SEAL - piston rod, narrow, with groove	1
6	*S5933	O-RING - gland.....	1
7	*1980249C1	RING - backup, gland O-ring	1
8	187-1524	SCREW - self-tapping, hex slotted, No. 8 NC x 3/8 inch.....	1
9	1980252C1	ROD ASSEMBLY - piston, 2" (51 mm) diameter.....	1
10	D32865	BUSHING - piston rod.....	2
11	1980186C1	PISTON - cylinder.....	1
12	*1980245C1	RING - wear, piston.....	1
13	*A32190	O-RING - piston.....	1
14	*1980250C1	SEAL - piston.....	1
15	28-2044	BOLT - hex head, 1-1/4" - 14 NF x 2-3/4", grade 8.....	1
16	G104989	WASHER - hardened.....	1
17	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long.....	2
	*1980181C1	KIT - seal, includes all items with an asterisk	1

NOTE: The cylinder assembly part number is stamped on some cylinder glands or tubes.

**480E and 480E LL Construction King
G101188 THREE-POINT HITCH TILT CYLINDER**

8-141

REF.	PART NO.	DESCRIPTION	REQ'D.
1	G101188	CYLINDER ASSEMBLY - 2-1/2" (64 mm) ID x 6-5/16" (160 mm) stroke, tilt	1
2	G32313	TUBE ASSEMBLY - cylinder.....	1
3	D34359	BUSHING - tube	2
	G104915	GLAND ASSEMBLY - cylinder.....	1
4	NSS	GLAND - cylinder.....	1
5	G102569	PLUG - nylon, thread locking, gland, if used.....	1
6	*D95141	SEAL - wiper, piston rod	1
7	*D36968	U-CUP SEAL - piston rod, wide	1
7	G100775	U-CUP SEAL - piston rod, service option, severe heat or cold	1
7A	*G109092	SEAL - piston rod, narrow, with groove	1
8	*G32129	BACKUP RING - gland O-ring.....	1
9	*A28318	O-RING - gland.....	1
10	187-1524	SCREW - self-tapping, hex slotted, No. 8 NC x 3/8", if used	1
11	G33352	ROD ASSEMBLY - piston, 1-1/4" (32 mm) diameter	1
12	D22200	BUSHING - piston rod, self-aligning	1
13	D27833	RING - snap.....	2
14	G100708	PISTON - cylinder.....	1
15	*G102289	SEAL - piston.....	1
16	*G100713	BACKUP RING - piston seal	1
17	*G100714	RING - wear, piston.....	2
18	28-1240	BOLT - hex head, 3/4" - 16 NF x 2-1/2", grade 8	1
19	G32317	WASHER - hardened.....	1
20	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long.....	1
	*G109475	KIT - seal, includes all items with an asterisk	1

NOTE: The cylinder assembly part number is stamped on some cylinder glands or tubes.

**480E and 480E LL Construction King
LOADER ANTIROLLBACK CONTROL**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D127097	ROD - bucket control	1
2	129-123	NUT - hex, 3/8 inch NF	2
3	213-41	CLEVIS - 3/8 NF x 2-1/2 inch	1
4	113-441	BOLT - hex, 1/2 NC x 2-1/4 inch	1
5	95-8	WASHER - flat, 1/2"	1
6	D75648	SPACER - pivot	1
7	D69578	LINK - rod connecting, pivot	1
8	D64050	WASHER - hardened	1
9	131-1116	NUT - hex, self-locking, 1/2 inch NC	1
10	141-54	PIN - clevis, 3/8 x 1-1/16 inch	2
11	132-331	COTTER PIN - 3/32" x 5/8"	2
12	L11182	CLEVIS - rod end, offset	1
13	D99007	ROD - input	1
14	D69180	BALL JOINT - 3/8"	1
15	129-123	NUT - hex, 3/8 inch NF	2
16	492-11038	WASHER - lock, 3/8 inch	1
17	D99017	LEVER - antirollback	1
18	219-20	GREASE FITTING - straight, 1/4" - 28 NF	1
19	113-630	BOLT - hex, 5/8 NC x 6 inch	1
20	T53567	WASHER - hardened, 5/8"	1
21	D69565	SLEEVE - spacer	1
22	D72099	SPRING - return	1
23	D99008	TUBE - antirollback, intermediate	1
24	141-54	PIN - clevis, 3/8 x 1-1/16 inch	1
25	132-331	COTTER PIN - 3/32 x 5/8"	1
26	D99183	BRACKET - pivot, antirollback	1
27	D28649	PIN - pivot	1
28	D25279	SNAP RING - pin retaining	2
29	D28610	WASHER - spacer, pivot pin	2
30	D99010	TUBE - antirollback, outer	1
31	141-54	PIN - clevis, 3/8 x 1-1/16 inch	2
32	132-331	COTTER PIN - 3/32" x 5/8"	2
33	D99012	ROD - antirollback	1
34	113-441	BOLT - hex, 1/2 NC x 2-1/4 inch	1
35	95-8	WASHER - flat, 1/2"	6
36	D40896	BUSHING - rod	1
37	492-11050	WASHER - lock, 1/2 inch	1
38	425-108	NUT - hex, 1/2 inch NC	1

480E and 480E LL Construction King
BACKHOE CONTROL TOWER WITH HAND SWING
480E MODELS ONLY

REF.	PART NO.	DESCRIPTION	REQ'D.
1	REF	FRAME - backhoe mounting, see page 9-31	1
2	D123963	CONTROL TOWER - backhoe.....	1
3	413-624	BOLT - hex, 3/8 NC x 1-1/2 inch	4
4	492-11038	WASHER - lock, 3/8 inch.....	4
5	129-103	NUT - hex, 3/8 inch NC	4
6	D124080	COVER - console, brown, includes decals, see page 9-169	1
7	187-575	SCREW - hex washer, self-tapping, 1/4" - 20 NC x 3/4", black.....	3
8	195-133	WASHER - flat, 5/16 x 3/4 x 1/16 inch, Teflon	3

**480E and 480E LL Construction King
BACKHOE BOOM LOCK CONTROL
480E MODELS ONLY**

9-25

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D59912	KNOB - control lever.....	1
2	D89994	CONTROL LEVER - boom lock.....	1
3	D89341	SUPPORT - boom lock control.....	1
4	113-207	BOLT - hex, 3/8 NC x 1 inch.....	2
5	492-11038	WASHER - lock, 3/8 inch.....	2
6	129-103	NUT - hex, 3/8 inch NC.....	2
7	219-56	GREASE FITTING - 90 degree, 1/8" NPT.....	1
8	D89344	LEVER - pivot.....	1
9	138-96	PIN - roll, 3/16 x 1 inch.....	1
10	213-41	CLEVIS - 3/8 NF x 2-1/2 inch.....	1
11	129-123	NUT - hex, 3/8 inch NF.....	1
12	141-54	PIN - clevis, 3/8 x 1-1/16 inch.....	1
13	132-320	PIN - cotter, 3/32 x 3/4 inch.....	1
14	D99786	ROD - boom lock control.....	1
15	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch.....	3
16	132-320	PIN - cotter, 3/32 x 3/4 inch.....	1
17	D99781	ARM - inner.....	1
18	D99782	ARM - outer.....	1
19	D99780	SHAFT - pivot, boom lock control.....	1
20	138-96	PIN - roll, 3/16 x 1 inch.....	2
21	D99783	BRACKET - pivot shaft.....	1
22	113-207	BOLT - hex, 3/8 NC x 1 inch.....	2
23	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch.....	2
24	492-11038	WASHER - lock, 3/8 inch.....	2
25	129-103	NUT - hex, 3/8 inch NC.....	2
26	D99785	LINK - shaft arm to boom lock valve lever.....	1
27	132-320	PIN - cotter, 3/32 x 3/4 inch.....	2
28	D89888	LEVER - boom lock valve.....	1
29	113-118	BOLT - hex, 5/16 NC x 5/8 inch.....	1
30	192-20	WASHER - lock, 5/16 inch.....	1
31	D88644	VALVE ASSEMBLY - boom lock, parts list page 8-91, mounting parts on page 8-43.....	1
32	D93422	BRACKET - control lever latch.....	1
33	113-118	BOLT - hex, 5/16 NC x 5/8 inch.....	2
34	192-20	WASHER - lock, 5/16 inch.....	2
35	425-105	NUT - hex, 5/16 inch NC.....	2
36	195-533	WASHER - flat, 17/32 x 1-1/16 x 5/64 inch.....	UAR

**480E and 480E LL Construction King
BACKHOE SWING TOWER AND BOOM
480E 12 FOOT BACKHOE MODELS ONLY**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D143749	SWING TOWER - backhoe	1
2	D83625	PIN - swing tower to mounting frame, lower	1
3	D26919	SNAP RING - pin retaining.....	2
4	D44813	SHIM - spacer	UAR
5	D86084	WASHER - wear	1
6	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long	2
7	D99132	PIN - swing tower to mounting frame, upper	1
8	D47866	PIN - swing cylinder to swing tower	2
9	113-618	BOLT - hex, 5/8 NC x 4 inch	2
10	192-525	WASHER - lock, 5/8", plated	2
11	425-1010	NUT - hex, 5/8 inch NC	2
12	D99200	BOOM - backhoe.....	1
13	D33023	BUSHING - boom end, 2" (51 mm) long	2
14	D31142	BUSHING - boom end, 1-1/2" (38 mm) long	2
15	D99195	SPACER - boom end	2
16	D40243	BUSHING - boom cylinder pivot, 3/4" (19 mm) long	1
17	D55626	BUSHING - boom cylinder pivot, 1-5/8" (41 mm) long.....	1
18	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long	1
19	219-36	GREASE FITTING - 45 degree, special short, 1/8" NPT.....	1
20	D99086	PIN - boom to swing tower.....	1
21	D26919	SNAP RING - pin retaining.....	1
22	D44813	SHIM - spacer, 1/32 inch (.78 mm) thick.....	UAR
22A	195-2155	WASHER - flat, 2", special, 1/8" (3.2 mm) thick	UAR
23	L47721	WASHER - spacer, 1/8" (3.2 mm) thick	UAR
24	D120744	PIN - boom cylinder to swing tower.....	1
25	D25280	RING - snap	3
26	30575	WASHER - shim	3
27	D81488	PIN - boom cylinder to boom.....	1
28	G102835	CYLINDER ASSEMBLY - boom, parts list page 8-125	1
29	D99037	PIN - dipper cylinder to boom	1
30	D25279	SNAP RING - pin retaining.....	1
31	D28610	WASHER - spacer.....	1
32	D31312	WASHER - hardened, spacer	UAR
33	G104844	CYLINDER ASSEMBLY - dipper, parts list page 8-127	1
34	D44881	PIN - dipper cylinder to dipper	1
35	D25279	SNAP RING - pin retaining.....	2
36	D28610	WASHER - spacer.....	6
37	D99084	PIN - swing lock.....	1

NOTE: For backhoe boom latch, see page 9-41.

**480E and 480E LL Construction King
BACKHOE DIPPER AND BUCKET
480E 12 FOOT BACKHOE MODELS ONLY**

9-45

REF.	PART NO.	DESCRIPTION	REQ'D.
37	D44883	PIN - link to dipper	1
38	195-2125	WASHER - flat, 1-5/16" x 2" OD x 1/8" thick	UAR
39	D26918	SNAP RING - pin retaining.....	2
40	D123081	PIN - dipper to bucket, used on all buckets except 12 inch (305 mm) bucket, if used.....	1
40A	D40244	PIN - dipper to bucket, for 12 inch (305 mm) buckets only, if used.....	1
41	195-2152	WASHER - flat, 1-25/32 x 2-1/2 x 7/64 inch.....	UAR
42	D25280	RING - snap	2
43	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long	1
44	REF	BUCKET - backhoe, see pages 9-55 through 9-65 for options	1
	D54136	FROST POINT ASSEMBLY - backhoe.....	1
45	NSS	BODY - frost point.....	1
46	D83306	POINT - tooth	1
47	D43417	PIN - tooth point.....	1
48	D37495	BUSHING - frost point pivot.....	2
49	195-63	WASHER - flat, 1-1/2", special, used with frost point.....	2
50	D25279	SNAP RING - item 32 pin retaining, used with frost point.....	2

SPECIAL FEATURE BUCKET LINKS

51	D132032	LINK - guide, left-hand, if used	1
52	D132028	LINK - guide, right-hand, if used	1
53	D32919	BUSHING - link, four each to D132032 and D132028.....	4
54	D32789	BUSHING - link, one each to D132032 and D132028.....	1
55	D132003	LINK - bucket, if used	2
56	D30933	BUSHING - bucket link, two each.....	2
57	D53576	PIN - bucket link to guide link.....	1
58	D28610	WASHER - spacer.....	2
59	D25279	SNAP RING - pin retaining.....	2
60	D44887	SPACER - bucket links	2
61	D53576	PIN - cylinder to link.....	1
62	74163	WASHER - spacer.....	2
63	D25279	SNAP RING - pin retaining.....	2
64	D44883	PIN - link to dipper.....	1
65	195-2125	WASHER - spacer.....	2
66	D26918	SNAP RING - pin retaining.....	2
67	D37614	PIN - link to bucket	1
68	74163	WASHER - spacer.....	2
69	D28610	WASHER - spacer, small.....	2
70	D25279	SNAP RING - pin retaining.....	2
71	G109342	CYLINDER ASSEMBLY - bucket, parts list page 8-135, used with special feature links and hardware, items 51-70, if used.....	1

**480E and 480E LL Construction King
BACKHOE BUCKETS
480E MODELS ONLY**

REF.	PART NO.	DESCRIPTION	REQ'D.
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TRENCHING BUCKETS

1	D52642	BUCKET ASSEMBLY - 12" (305 mm), order from Machinery Price List	1
2	D29424	CUTTING EDGE - bucket, right-hand side	1
3	D29423	CUTTING EDGE - bucket, left-hand side	1
4	D37464	CUTTING EDGE - bucket, center.....	1
5	D40243	BUSHING - bucket, at dipper	2
6	D30933	BUSHING - bucket, bucket link pin hole	4
7	D37473	BUCKET ASSEMBLY - 18" (457 mm), order from Machinery Price List	1
8	D21606	CUTTING EDGE - bucket, right-hand side	1
9	D21605	CUTTING EDGE - bucket, left-hand side	1
10	D37642	CUTTING EDGE - bucket, center.....	1
11	D37495	BUSHING - bucket, at dipper	2
12	D30933	BUSHING - bucket, upper and lower bucket link pin hole.....	4
7	D37474	BUCKET ASSEMBLY - 24" (610 mm), order from Machinery Price List	1
8	D21606	CUTTING EDGE - bucket, right-hand side	1
9	D21605	CUTTING EDGE - bucket, left-hand side	1
10	D37507	CUTTING EDGE - bucket, center.....	1
11	D37495	BUSHING - bucket at dipper	2
12	D30933	BUSHING - bucket, upper and lower bucket link pin hole.....	4

BUCKET TEETH

13	D26368	SHANK - tooth, original equipment, for crimp retained point.....	UAR
14	D58499	SHANK - tooth, service option, for crimp retained point	UAR
15	D27748	POINT - tooth, standard, crimp retained.....	UAR
16	D36720	POINT - tooth, heavy duty service option, crimp retained.....	UAR

NOTE: Buckets are listed on pages 9-55 through 9-65.

NOTE: See page 9-61 for flex pin retained tooth point.

Continued on next page

BACKHOE BUCKETS

480E MODELS ONLY

REF.	PART NO.	DESCRIPTION	REQ'D.
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BELLHOLE BUCKETS

1	D41547	BUCKET ASSEMBLY - 12" (305 mm), order from Machinery Price List	1
2	D37490	CUTTING EDGE - bucket.....	1
3	D40243	BUSHING - bucket, at dipper	2
4	D30933	BUSHING - bucket, bucket link pin hole	2
1	D41548	BUCKET ASSEMBLY - 16" (406 mm), order from Machinery Price List	1
2	D37518	CUTTING EDGE - bucket.....	1
3	D37495	BUSHING - bucket, at dipper	2
4	D30933	BUSHING - bucket, bucket link pin hole	2
1	D41549	BUCKET ASSEMBLY - 30" (762 mm), order from Machinery Price List	1
2	D37515	CUTTING EDGE - bucket.....	1
3	D37495	BUSHING - bucket at dipper	2
4	D30933	BUSHING - bucket, bucket link pin hole	2

COMBINATION BELLHOLE AND GRAVEYARD BUCKET

5	D41550	BUCKET ASSEMBLY - 36" (914 mm), order from Machinery Price List	1
6	D37516	CUTTING EDGE - bucket.....	1
7	D37495	BUSHING - bucket, at dipper	2
8	D30933	BUSHING - bucket, bucket link pin hole	2

BUCKET TEETH

9	D58499	SHANK - tooth, service option, for crimp retained point	UAR
10	D26368	SHANK - tooth, original equipment, for crimp retained point	UAR
11	D27748	POINT - tooth, standard, crimp retained	UAR
12	D36720	POINT - tooth, heavy duty service option, crimp retained	UAR

NOTE: Buckets are listed on pages 9-55 through 9-65.

NOTE: See page 9-61 for flex pin retained tooth point.

THREE-POINT HITCH DRAFT ARMS, LINKAGE, AND CYLINDERS
CATEGORY I HYDRAULIC HITCH AND OPTIONAL CATEGORY II DRAFT ARMS
MODELS WITH 3/4 INCH MOUNTING HOLES IN PITCH CYLINDER

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D51569	ROCKSHAFT - three-point hitch	1
2	113-241	BOLT - hex, 3/8 NC x 3 inch	1
3	492-11038	WASHER - lock, 3/8 inch	1
4	129-103	NUT - hex, 3/8 inch NC	1
5	D72875	TUBE - rockshaft	1
6	D50146	BUSHING - tube	2
7	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long	1
8	D51299	PIN - mounting, tilt cylinder and strut, upper	2
9	D25277	SNAP RING - retaining	2
10	D51276	STRUT - stationary	1
11	G101188	CYLINDER ASSEMBLY - tilt, parts list page 8-141	1
12	D51297	PIN - mounting, strut, lower	1
13	D25277	SNAP RING - retaining, lower strut mounting pin	1
14	D30609	PIN - mounting, tilt cylinder, lower	1
15	195-553	WASHER - flat, plated, cylinder alignment	2
16	D25277	SNAP RING - retaining, lower tilt cylinder mounting pin	2
17	D51302	PIN - mounting, lift cylinder upper	1
18	D26918	SNAP RING - retaining, upper lift cylinder mounting pin	1
19	G101189	CYLINDER ASSEMBLY - lift, parts list page 8-139	1
20	113-257	BOLT - hex, 3/8 NC x 2-1/2 inch	1
21	492-11038	WASHER - lock, 3/8 inch	1
22	129-103	NUT - hex, 3/8 inch NC	1
23	D51695	PIN - mounting, lift cylinder, lower	1
24	D51692	SPACER - lift cylinder mounting pin, lower	1
25	D51294	PIN - mounting, pitch cylinder at mounting frame	1
26	T25683	SNAP RING - retaining, pitch cylinder mounting pin	1
27	G33128	CYLINDER ASSEMBLY - pitch, parts list page 8-143	1
28	G16735	PIN - mounting, pitch cylinder to equipment	1
28A	T39236	SPACER - to adapt G16735 pin for use with category II hitch, if used	1
29	A30338	PIN - klik	1
30	113-257	BOLT - hex, 3/8 NC x 2-1/2 inch	2
31	492-11038	WASHER - lock, 3/8 inch	2
32	129-103	NUT - hex, 3/8 inch NC	2

NOTE: See pages 9-79 and 9-81 for D103040 kit to convert category I to category I-II hitch.

Continued on next page

480E and 480E LL Construction King
FRONT COUNTERWEIGHT
480E MODELS ONLY

9-85

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D69118	COUNTERWEIGHT - front, 700 lbs (317.5 kg).....	1
2	113-731	BOLT - hex, 3/4 NC x 3-1/4 inch	4
3	D34666	WASHER - hardened	4

NOTE: See page 9-91 for channel bracket and baffle used with front counterweight.

**480E and 480E LL Construction King
FENDERS, STEP, AND TOOL BOX
480E MODELS ONLY**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D75595	FENDER - rear, right-hand.....	1
2	D143492	FENDER - rear, left-hand, includes 321-3060, 321-3705, 321-6262 and 321-6958 decals. See pages 9-169 and 9-171.....	1
3	113-441	BOLT - hex, 1/2 NC x 2-1/4 inch.....	1
4	492-11050	WASHER - lock, 1/2 inch.....	1
5	425-108	NUT - hex, 1/2 inch NC.....	1
6	26-1036	BOLT - hex, 5/8 NC x 2-1/4 inch, grade 8.....	4
7	492-11062	WASHER - lock, 5/8 inch.....	4
8	129-183	NUT - hex, 5/8 NC, grade 8.....	4
9	D76746	STEP - operators compartment.....	1
10	413-624	BOLT - hex, 3/8 NC x 1-1/2 inch.....	4
11	492-11038	WASHER - lock, 3/8 inch.....	4
12	495-21044	WASHER - flat, 7/16 x 1 x 5/64 inch.....	4
13	129-103	NUT - hex, 3/8 inch NC.....	4
14	492-11050	WASHER - lock, 1/2 inch.....	2
15	113-410	BOLT - hex, 1/2 NC x 1-1/2 inch.....	2
16	425-108	NUT - hex, 1/2 inch NC.....	2
17	D124090	TOOL BOX - tractor, includes internal clip for operators manual.....	1
18	113-3	BOLT - hex, 1/4 NC x 3/4 inch.....	4
19	192-19	WASHER - lock, 1/4 inch.....	4
20	425-104	NUT - hex, 1/4 inch NC.....	4
21	151-522	POP RIVET - 3/16".....	1
22	L18337	STRAP - nylon retaining.....	1
23	R46465	CORD - manual retaining.....	1
24	113-206	BOLT - hex, 3/8 NC x 3/4 inch, used to mount tool box on fender for models without cab or canopy with tractor lamps.....	3
25	492-11038	WASHER - lock, 3/8 inch, if used.....	3
26	129-103	NUT - hex, 3/8 inch NC, if used.....	3

NOTE: See page 9-97 for 480E LL fenders, step, and tool box. The parts on this page are for 480E only.

**480E and 480E LL Construction King
FLOOR PLATES AND FIREWALL
480E MODELS ONLY**

9-105

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D132935	FIREWALL - pedal mounting, no longer available, order D140402 firewall	1
1A	D140402	FIREWALL - pedal mounting	1
1B	25-226	NUT - square, 3/8 inch NC, D132935 or D140402 firewall	2
2	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch	12
3	492-11038	WASHER - lock, 3/8 inch	12
4	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	12
5	131-856	NUT - J-type, 3/8" - 16 NC	12
6	*REF	TRIM - edge, 2-1/4" (57 mm) long, cut from F42827 bulk, see below, firewall opening, horizontal	2
7	*REF	TRIM - edge, 1-13/16" (46 mm) long, cut from F42827 bulk, see below, firewall opening, vertical	2
8	D68362	PANEL - front, left-hand	1
9	113-2619	BOLT - hex, 5/8 NC x 2 inch, grade 8, used on models with cab or canopy	2
10	129-183	NUT - hex, 5/8 inch NC, grade 8	2
11	**REF	TRIM - edge, 10-3/8" (263 mm) long, cut from D95814 bulk, see below, panel	1
12	D70774	PLATE - floor entrance	1
13	113-207	BOLT - hex, 3/8 NC x 1 inch	1
14	492-11038	WASHER - lock, 3/8 inch	1
15	495-21044	WASHER - flat, 7/16 x 1 x 5/64 inch	1
16	D66769	PLATE - floor, front, right-hand, used with item 19 floor plate	1
17	113-206	BOLT - hex, 3/8 NC x 3/4 inch, if used	1
18	492-11038	WASHER - lock, 3/8 inch, if used	1
19	D127013	PLATE - floor, front, used with item 16, no longer available, for service order D143509 floor plate, item 19B, and (4) 131-634 nuts	1
19A	D134876	PLATE - floor, one piece, replaced two floor plates (items 16 and 19 on some models, no longer available, order D143509 plate	1
19B	D143509	PLATE - floor, one piece, replaces two floor plates (items 16 and 19) on some models	1
19C	131-634	NUT - J-type, 3/8" - 16 NC, if used	4
20	113-207	BOLT - hex, 3/8 NC x 1 inch	8
21	492-11038	WASHER - lock, 3/8 inch	12
22	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	4
23	D68457	BRACKET - crossmember	1
	*F42827	TRIM - edge, 116" (2946 mm) long	UAR
	**D95814	TRIM - edge, 13-3/16" (335 mm) long	UAR

NOTE: See pages 9-109 and 9-111 for 480E LL floor plates and firewall. The parts on this page are for 480E only.

Continued on next page

**480E and 480E LL Construction King
SEAT MOUNTING PARTS AND SEAT BELT
480E LL MODELS ONLY**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	REF	SEAT ASSEMBLY - operators, for correct assembly and components, see pages 9-117 through 9-121	1
2	D99301	POST - seat mounting	1
3	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch	4
4	492-11038	WASHER - lock, 3/8 inch	4
5	D83760	SEAT BELT- 3" (76 mm) wide, fastens to floor plate, if used	1
6	F42236	BOLT - shoulder, 7/16" - 20 NF x 1-1/4", plated	2
7	192-22	WASHER - lock, 7/16 inch	2
8	129-124	NUT - hex, 7/16 inch NF	2
9	D135623	BELT - seat, 2 inch (51 mm) wide, with retractor, fastens to seat, if used	1
10	414-716	BOLT - hex, 7/16 NF x 1 inch	2
11	495-11047	WASHER - flat, 7/16 inch	4
12	492-11044	WASHER - lock, 7/16 inch	2
13	425-117	NUT - hex, 7/16 inch NF	2

NOTE: See page 9-113 for 480E seat mounting parts and seat belt. The parts on this page are for 480E LL only.

REAR CLOSURE PANELS**MODELS WITH BACKHOE
480E MODELS ONLY**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	D123223	CLOSURE PANEL - rear, welded one piece, no longer available, order D143501 three piece closure panel kit below	1
2	413-524	BOLT - hex, 5/16 NC x 1-1/2 inch	3
2A	413-514	BOLT - hex, 5/16 NC x 7/8 inch	2
3	492-11031	WASHER - lock, 5/16 inch	5
4	*REF	SEAL - rear closure panel, 22" (559 mm) long, cut from L35741 bulk, see below	2
5	**REF	SEAL - rubber, rear closure panel, 10-13/16" (275 mm) long, cut from F64773 bulk, see below	2
6	D99720	BRACKET - top, rear closure panel	1
7	REF	TRIM - edge, 38" (965 mm) long, cut from D52812 bulk, see below	1
8	113-3	BOLT - hex, 1/4 NC x 3/4 inch	5
9	195-102	WASHER - flat, 5/16 x 3/4 x 1/16 inch	5
10	192-19	WASHER - lock, 1/4 inch	5
11	425-104	NUT - hex, 1/4 inch NC	5
12	413-628	BOLT - hex, 3/8 NC x 1-3/4 inch	2
13	495-11041	WASHER - flat, 13/32 x 13/16 x 1/16 inch	2
14	492-11038	WASHER - lock, 3/8 inch	2
15	425-106	NUT - hex, 3/8 inch NC	2
	D143501	KIT - closure panel, rear, three piece	1
16	D143505	PANEL - rear closure, includes D143500 and 321-4481 decals plus D87870 reflector, see pages 9-169 and 9-171	1
17	D99723	PLATE - right-hand mounting, closure panel	1
18	D99724	PLATE - left-hand mounting, closure panel	1
19	413-612	BOLT - hex, 3/8 NC x 3/4 inch	4
20	492-11038	WASHER - lock, 3/8 inch	4
21	425-106	NUT - hex, 3/8 inch NC	4
	D52812	TRIM - edge, 83" (2108 mm) long	UAR
	*L35741	SEAL - foam, bulk, 50 ft (1524 cm) long	UAR
	**F64773	SEAL - rubber, bulk, 15 ft (457 cm) long	UAR

NOTE: For additional closure panel mounting hardware, see backhoe boom latch on page 9-41.

**480E and 480E LL Construction King
CAB DOOR AND LEFT-HAND WINDOW
480E MODELS ONLY**

9-135

REF.	PART NO.	DESCRIPTION	REQ'D.
1	F96695	FRAME - front window, left-hand.....	1
2	353-62	PLUG - plastic, window frame sides and top	8
3	*REF	SEAL - left-hand window, 90" (2286 mm) long, cut from F43086 bulk.....	1
4	113-259	BOLT - hex, 3/8 NC x 4-1/2 inch	1
5	131-203	NUT - hex, self-locking, 3/8" - 16 NC, plated	1
6	F42100	PIN - window and door.....	1
7	F43966	HANDLE - window	1
8	178-1102	SET SCREW - hex socket, No. 10 - 32 NF x 1/4", cone point	1
9	F93880	SHAFT - window latch	1
10	131-638	NUT - push on, shaft.....	1
11	F43968	SPRING - window latch.....	1
12	F93892	LATCH - window, left-hand.....	1
13	F43964	BLOCK - tapped, window latch	2
14	182-540	MACHINE SCREW - pan head slotted, 1/4" - 20 NC x 3/8".....	8
15	192-19	WASHER - lock, 1/4 inch.....	8
16	F93883	DOOR - cab, does not include latches	1
17	**REF	SEAL - lower door, 61-1/2" (1562 mm) long, cut from F44619 bulk.....	1
18	*REF	SEAL - top of door, 23-3/4" (602 mm) long, cut from F43086 bulk.....	1
19	F44591	HINGE - door.....	1
20	R37339	BRACKET - door stop.....	1
21	L60224	BUMPER - rubber, door stop	1
22	111-317	BOLT - carriage, 3/8 NC x 1 inch.....	3
23	195-525	WASHER - flat, 13/32 x 13/16 x 1/16 inch	3
24	492-11038	WASHER - lock, 3/8 inch.....	3
25	129-103	NUT - hex, 3/8 inch NC	3
26	F45256	PAD - foam, door panel.....	1
	*F43086	SEAL - bulk roll, 100 ft (3048 cm) long.....	UAR
	**F44619	SEAL - bulk roll, 100 ft (3048 cm) long.....	UAR
	345-44	ADHESIVE - for attaching foam pads to metal surfaces, spray can, 19-1/2 fluid ounces	1

NOTE: For window glass, see page 9-141 or 9-143.

Continued on next page

**480E and 480E LL Construction King
CAB HEATER LINES AND DEFROSTER
480E MODELS ONLY**

9-145

REF.	PART NO.	DESCRIPTION	REQ'D.
1	218-445	ADAPTER - straight, 7/8-14 x 1/2 PT, at water pump, upper	1
2	D131677	TUBE - engine block to hose	1
3	A16764	VALVE - water shut-off, at water pump, lower	1
3A	221-89	REDUCER - 1/2 x 3/8 PT, at water pump, lower	1
4	*REF	HOSE - heater, models with heater on right-hand side of cab, 92" (2337 mm) long, if used	2
5	*REF	HOSE - heater, models with heater on left-hand side of cab, 128" (3251 mm) long, if used	2
6	214-253	CLAMP - hose retaining, NO. 10 type F	4
7	S88820	CLAMP - hose to engine block	1
8	814-12025	BOLT - hex flange head, 12 mm - 1.75 x 25 mm	1
9	492-11050	WASHER - lock, 1/2 inch	1
10	D73137	GROMMET - heater hose at floor plate	2
11	L18337	STRAP - nylon retaining	UAR
12	D120191	HEATER - cab, parts list page 9-149	1
13	113-103	BOLT - hex, 5/16 NC x 1 inch	3-4
14	192-20	WASHER - lock, 5/16 inch	3-4
15	195-521	WASHER - flat, 11/32 x 11/16 x 3/64 inch	3-4
16	425-105	NUT - hex, 5/16 inch NC	3-4
17	D78002	CIRCUIT BREAKER - 15 amperes	1
18	D75588	WIRE - circuit breaker to heater switch, models with heater on right-hand side of cab, 80" (2032 mm) long, if used	1
19	D75817	WIRE - circuit breaker to heater switch, models with heater on left-hand side of cab, 95" (2413 mm) long, if used	1
20	49853	CLAMP - circuit breaker wire to floor plate, use fender mounting hardware	3
21	D86924	BRACKET - heater switch mounting	1
22	D75650	SWITCH - heater	1
23	D75652	WIRE - switch to heater	1
24	D69902	WIRE - heater ground	1
	*A42610	HOSE - bulk roll, 50 ft (1524 cm) long	UAR

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480E and 480E LL Construction King
FRONT AND REAR WINDSHIELD WIPERS
480E MODELS ONLY

REF.	PART NO.	DESCRIPTION	REQ'D.
1	REF	MOTOR - windshield wiper, front, parts list page 9-159.....	1
2	114-1	BOLT - hex, 1/4 NF x 1 inch.....	2
3	195-518	WASHER - flat, 9/32 x 5/8 x 3/64 inch	2
4	192-19	WASHER - lock, 1/4 inch.....	2
5	129-642	DOME NUT - hex, No. 10, plated.....	1
6	195-513	WASHER - flat, 7/32 x 1/2 x 1/16 inch	1
7	F43960	STUD - windshield wiper arm	1
8	195-518	WASHER - flat, 9/32 x 5/8 x 3/64 inch	1
9	129-161	NUT - hex, jam, 1/4 inch NF.....	1
10	L35260	ARM - front windshield wiper, 20" (508 mm) long.....	1
11	F42706	BLADE - front windshield wiper, 19" (483 mm) long	1
11A	182-567	MACHINE SCREW - No. 5 - 40 NC x 1/2", plated, blade attaching	1
11B	129-14	NUT - hex, No. 5 - 40 NC, plated, blade attaching	1
12	A42660	SWITCH - windshield wiper, front.....	1
13	A42561	NUT - hex, switch.....	1
14	111282C1	KNOB - switch, was A42578	1
15	REF	MOTOR - windshield wiper, rear, parts list page 9-159	1
16	A36091	ARM - drive	1
17	D71412	LINK - drive	1
18	182-528	SCREW - machine, pan head, No. 10 NF x 1/2 inch	2
19	192-18	WASHER - lock, 3/16 inch.....	2
20	D71411	WASHER - wave	1
21	F44452	NUT - hex, special lock.....	1
22	A22431	SPACER - pivot shaft.....	2
23	D71414	CLIP - spring	2
	D71415	SHAFT ASSEMBLY - pivot.....	1
24	D71417	WASHER - flat, fiber	1
25	D71418	WASHER - flat, steel.....	1
26	D71419	NUT - hex jam	1
27	D71420	CAP - shaft	1
28	D71421	DRIVER - knurled.....	1
29	193-9	WASHER - external tooth lock, 5/16".....	1
30	D71422	NUT - hex, cap, pivot shaft, may be replaced with item 43 nut on page 9-157	1
31	NSS	SHAFT - pivot	1

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**480E And 480E LL Constuction King
SLOW MOVING VEHICLE EMBLEM**

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REF.	PART NO.	DESCRIPTION	REQ'D.
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USED ON MODELS WITH BACKHOE

1	D52564	SPRING - emblem retaining.....	1
2	195-518	WASHER - flat, 9/32 x 5/8 x 3/64 inch	2
3	129-409	WING NUT - 1/4" - 20 NC, plated	2
4	D123347	EMBLEM ASSEMBLY - plate and decal.....	1
5	321-4311	DECAL - SMV emblem.....	1
6	113-3	BOLT - hex, 1/4 NC x 3/4 inch, used when storing emblem only, not shown	2
7	425-104	NUT - hex, 1/4 inch NC, used when storing emblem only, not shown	2

USED ON MODELS WITHOUT BACKHOE

8	D69980	BRACKET - SMV emblem mounting, no longer used, replaced by D91465 bracket.....	1
8A	D91465	BRACKET - SMV emblem mounting, if used	1
9	113-102	BOLT - hex, 5/16 NC x 3/4 inch	2
10	192-20	WASHER - lock, 5/16 inch	4
11	425-105	NUT - hex, 5/16 inch NC	4
12	A59457	BRACKET - emblem mounting, short.....	1
13	111-215	BOLT - round head, 5/16" - 18 NC x 3/4", plated	2
14	D123347	EMBLEM ASSEMBLY - plate and decal.....	1
15	321-4311	DECAL - SMV emblem.....	1
16	A59451	BRACKET - emblem mounting, vertical, long	1
17	182-516	MACHINE SCREW - pan head slotted, No. 10 - 24 NC x 1/2"	2
18	192-18	WASHER - lock, 3/16 inch.....	2
19	129-17	NUT - hex, No. 10-24.....	2

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