

# 1085C Excavator

## Parts Catalog

8-5490

Reprinted

**CASE**

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**1085C Cruz-Air Excavator**  
**AIR CLEANER AND AIR INTAKE PARTS**

REF	PART NO.	DESCRIPTION	REQ'D.
	L10659	CAP - ASSEMBLY - air cleaner.....	1
1	NSS	CAP - air cleaner.....	1
2	214-269	CLAMP - adj., 4 - 5 inch dia. ....	1
3	S243577	TUBE - air cleaner inlet .....	1
4	214-362	CLAMP - adj , 4-9/16 - 4-7/8 inch dia ..	2
5	A170613	CLEANER ASSEMBLY - air, parts list page 2-11. ....	1
6	A59569	INDICATOR - restriction, air cleaner.....	1
	A16574	CLAMP ASSEMBLY - air cleaner.....	2
7	NSS	CLAMP - air cleaner .....	1
8	113-120	BOLT - hex, 5/16 NC x 1-3/4 inch .....	1
9	192-20	WASHER - lock, 5/16 inch .....	1
10	425-105	NUT - hex, 5/16 inch NC .....	1
11	S517735	HOSE - air cleaner.....	1
12	214-379	CLAMP - adj. 3-1/2 - 3-13/16 inch dia.....	1
13	413-616	BOLT - hex, 3/8 NC x 1 inch .....	4
14	131-217	NUT - hex, self-locking, 3/8 inch NC, grade 8.....	4
15	S619452	BRACKET - air cleaner and accelerator mounting, see page 3-7, item 23 .....	1
16	S241675	PAD - air cleaner .....	1

1085C Cruz-Air Excavator  
**WATER PUMP SYSTEM**  
 6T-590 Engine

REF	PART NO.	DESCRIPTION	REQ'D.
	AR77703	PUMP - water, remanufactured (North America only) .....	1
	AC77703	RETURN NUMBER - use this part number to return pump	
		core for credit .....	1
	A77703	PUMP KIT - water, new.....	1
1	NSS	PUMP ASSEMBLY - water.....	1
2	NSS	PULLEY - pump (Order A77703) .....	1
3	238-5341	O-RING - 3-1/2 x 3-11/16 x 3/16 inch.....	1
4	J900227	BOLT - hex, 8 mm - 1.0 x 22 mm .....	2
8	J913433	BRACKET ASSEMBLY - fan.....	1
9	845-8040	BOLT - heavy hex flange, 8 mm - 1.25 x 40 mm .....	4
9	J900678	BOLT - hex flange, 8 x 63 mm .....	4
10	J914462	PULLEY - fan, 165 mm diameter.....	1
15	J914086	TENSIONER ASSEMBLY - belt .....	1
16	854-10070	BOLT - heavy hex flange, 10 mm - 1.50 x 70 mm, Grade 10.9.....	1
17	J904548	BRACKET - belt tension.....	1
18	J903095	SCREW - flat head cap, 8 x 25 mm .....	2

**1085C Cruz-Air Excavator  
OIL FILTER AND COOLER  
6T-590 Engine**

**2-29**

REF.	PART NO.	DESCRIPTION	REQ'D.
	J915766	KIT - oil cooler cover.....	1
2	J909352	HEAD ASSEMBLY - filter and cooler .....	1
3	J909355	ADAPTER - filter head .....	1
4	J902338	VALVE - relief, pressure .....	1
5	J914084	PLUNGER - regulator, pressure.....	1
6	J915787	PLUG - pipe.....	1
7	J909397	O-RING - sealing.....	1
12	J906619	PLUG - hex socket pipe, 1/8-27 PT.....	1
15	J903261	SPRING - compression.....	1
20	845-8035	BOLT - heavy hex flange, 8 mm - 1.25 x 35 mm .....	14
21	J908615	FILTER - engine oil.....	1
22	J918257	GASKET - filter head.....	1
23	J911940	CORE - cooler, oil.....	1
24	J918256	GASKET - cooler core.....	1

**1085C Cruz-Air Excavator**  
**CYLINDER BLOCK**  
**6T-590 Engine**

REF	PART NO	DESCRIPTION	REQD.
	A174292	ENGINE ASSEMBLY - complete (Includes all parts except starter, alternator, fan, fan belt, air cleaner, muffler and exhaust pipe) .....	1
	AR174356	ENGINE ASSEMBLY - basic, remanufactured (North America only) .....	1
	AC174356	RETURN NUMBER - use this part number to return engine assembly for credit .....	1
	A174356	ENGINE ASSEMBLY - basic, new (Includes all parts except starter, alternator, fan, fan belt, fan bracket, air cleaner, muffler, exhaust manifold and pipe, flywheel and housing, oil fill tube, dipstick, fuel injection pump, injectors and lines, front crank pulley, belt tensioner and turbocharger) .....	1
	JR910510	BLOCK ASSEMBLY - engine short, remanufactured (North America only) .....	1
	JC910510	RETURN NUMBER - engine short block (Use this part number to return block core for credit) .....	1
	J910510	BLOCK ASSEMBLY - short, engine, new (Includes stripped block pistons, connecting rods and bearings, crankshaft and bearings) (Also order J905813 kit) .....	1
1	J905810	BLOCK ASSEMBLY - stripped engine (Also order J905813 kit) .....	1
2	J900967	CAP - main bearing .....	7
3	J900068	RING - dowel, 18 mm OD .....	14
4	J904217	BOLT - bearing cap, special .....	14
5	REF	BUSHING - camshaft, front (See Page 2-37) .....	1
6	J900965	PLUG - expansion, 58 mm OD .....	6
7	J900956	PLUG - expansion, 18 mm OD .....	3
8	23624R1	PLUG - expansion, 26 mm .....	4
	J905813	KIT - block hardware .....	1
9	J901020	NOZZLE - piston cooling .....	6
10	J900958	PLUG - expansion, 32 mm OD .....	1
11	J900955	PLUG - expansion, 10 mm OD .....	2
12	J900687	PLUG - expansion, (Welch) 60 mm OD .....	1
15	A77439	PLUG - expansion, 0.886 mm OD .....	1
16	J900257	PIN - dowel, locating .....	2
18	J902343	RING - dowel, 16 mm OD .....	2
19	J900068	RING - dowel, 18 mm OD .....	2
21	J906619	PLUG - hex socket pipe, 1/8-27 PT .....	2
22	A77429	PLUG - hex socket pipe, 1/2-14 PT .....	1
23	J903744	TUBE - turbocharger oil drain .....	1
25	J900267	SEAL ASSEMBLY - cover bolt .....	4
26	845-8016	BOLT - heavy hex flange, 8 mm - 1.25 x 16 mm .....	4
27	J911822	COVER - tappet .....	1
28	J907586	BAFFLE - tappet cover .....	1
29	J904776	GASKET - tappet cover .....	1
33	J906593	HOSE - breather .....	1
34	J904230	CLAMP - spring hose .....	1
35	J909670	CLIP - retaining .....	1

Continued on next page

**GASKET KITS****6T-590 Engine****Valve Grind**

REF	PART NO.	DESCRIPTION	REQ'D.
1	A77675	GASKET KIT - valve grind (See Note A) .....	1
2	J903301	GASKET - housing .....	1
3	J901097	SEAL - valve .....	12
4	J901356	GASKET - turbocharger to manifold .....	1
5	J905443	GASKET - exhaust manifold .....	6
6	J914029	GASKET - intake manifold .....	1
7	J914388	GASKET - drain tube .....	1
8	J902363	SEAL - oil fill cap .....	1
9	J902666	SEAL - rocker cover .....	6
10	J910824	O-RING - cover bolt .....	6
11	J900808	SEAL - injector .....	6
12	J903380	SEAL - connector .....	6

**Cylinder Block**

15	A77674	GASKET KIT - engine block (See Note B) .....	1
16	J903475	SEAL - cover .....	1
17	J914385	GASKET - cover to housing .....	1
18	J916131	GASKET - gear housing .....	1
19	J905595	GASKET - timing pin housing .....	1
20	J913994	O-RING - sealing .....	1
22	J913192	GASKET - cover plate .....	1
23	238-5341	O-RING - 3-1/2 x 3-11/16 x 3/16 inch .....	1
24	J904776	GASKET - tappet cover .....	1
25	J914386	GASKET - seal retainer .....	1
26	J906697	O-RING - sealing .....	1
27	J918256	GASKET - cooler core .....	1
29	J918257	GASKET - filter head .....	1
30	J902425	WASHER - seal, plug .....	1
31	J906696	O-RING - engine oil filler .....	1
32	J914389	GASKET - fuel pump .....	1
33	J912473	O-RING - flywheel housing .....	1
35	J914304	GASKET - fuel lift pump .....	1
37	J900267	SEAL ASSEMBLY - cover bolt .....	6
38	238-5212	O-RING - 7/8 x 1.00 x 1/8 inch .....	1
39	J906695	O-RING - fuel filter stud, 14 mm ID .....	1
40	J906694	O-RING - fuel filter head, 17 mm ID .....	1

**NOTE A:** When just the valve grind gasket kit is used, also order the required cylinder head gasket on Page 2-33.

**NOTE B:** For complete engine overhaul, order 1 each of valve grind kit, cylinder block kit, oil pan kit Page 2-31, front and rear crankshaft seal kit Page 2-43 and required cylinder head gasket Page 2-33.

1085C Cruz-Air Excavator  
ACCELERATOR LINKAGE

ACCELERATOR PEDAL TO THROTTLE CONTROL LEVER

REF	PART NO	DESCRIPTION	REQ'D.
1	S517447	PEDAL - accelerator control, see page 3-5, items 1 through 8 for mounting and pedal cover .....	1
2	S120791	LINK - control cable .....	2
3	141-62	PIN - clevis, 1/4 x 1-1/8 inch .....	2
4	32-410	PIN - cotter, 1/16 x 5/8 inch .....	2
5	495-11028	WASHER - flat, 9/32 x 5/8 x 1/16 inch .....	8
6	L53928	JOINT - ball, control cable, at accelerator pedal .....	1
7	425-114	NUT - hex, 1/4 inch NF .....	2
8	S243310	CABLE - throttle control .....	1
9	S120817	BOLT - U-type, includes nuts, control cable mounting .....	1
10	A10329	JOINT - ball, at throttle control .....	1
11	131-498	NUT - hex, self-locking, 1/4 inch NF .....	1
12	S517839	CONTROL ASSEMBLY - throttle, parts list and mounting hardware on page 3-15 .....	1
13	413-410	BOLT - hex, 1/4 NC x 5/8 inch .....	2
14	S243746	BRACKET - throttle control mounting .....	1
15	413-428	BOLT - hex, 1/4 NC x 1-3/4 inch .....	2
16	131-71	NUT - hex, self-locking, 1/4 inch NC .....	1
17	S121043	SPACER - bracket .....	2
18	S517554	BRACKET - hand throttle mounting .....	1
19	413-412	BOLT - hex, 1/4 NC x 3/4 inch .....	1
20	495-21031	WASHER - flat, 5/16 x 47/64 x 1/16 inch .....	1
21	S517929	BRACKET - accelerator switch mounting .....	1
22	S517927	PLATE - throttle lever .....	1
23	163-39	SCREW - machine, hex washer head, No. 10 NC x 3/4 inch .....	4
24	S517931	LEVER - throttle control .....	1
25	T34930	KNOB - throttle control lever .....	1
26	62-32520	BOLT - hex socket, 1/4 NF x 1-1/4 inch .....	1
27	121-250	BOLT - shoulder, hex socket, 5/16 NC x 2 inch .....	1
28	495-21044	WASHER - flat, 7/16 x 1 x 5/64 inch .....	1
29	S121075	SPRING - throttle control lever .....	1
30	131-69	NUT - hex, self-locking, 5/16 inch NC .....	1

**NOTE:** See page 3-5 and 3-7 for additional accelerator linkage.

1085C Cruz-Air Excavator  
**FUEL FILTER AND LIFT PUMP**  
 6T-590 Engine

REF	PART NO.	DESCRIPTION	REQ'D.
1	J915240	HEAD ASSEMBLY - fuel filter.....	1
3	J906694	O-RING - fuel filter head, 17 mm ID.....	1
4	J906695	O-RING - fuel filter stud, 14 mm ID.....	1
5	J903293	NUT - hex, 16 - 2.0 mm.....	1
6	J903845	ADAPTER - fuel.....	1
	A77470	FILTER KIT - fuel.....	1
8	NSS	FILTER - fuel, primary.....	1
9	NSS	FILTER - fuel, secondary.....	1
12	J904374	PUMP ASSEMBLY - lift, fuel.....	1
13	J914304	GASKET - fuel lift pump.....	1
14	845-8020	BOLT - hex flange, 8 mm - 1.25 x 20 mm.....	2
15	J907582	TUBE ASSEMBLY - fuel supply.....	1
16	J905860	BOLT - banjo hex, 12 mm - 1.5 x 24 mm.....	1
17	J903037	WASHER - sealing, 12 x 18 x 1 mm.....	2
29	J917564	TUBE ASSEMBLY - fuel supply.....	1
30	NSS	BOLT - connector, banjo hex special (Order J905860).....	1
31	J903037	WASHER - sealing, 12 x 18 x 1 mm.....	2
32	NSS	SCREW - hex special, vent (Order J905860).....	1

**1085C Cruz-Air Excavator**  
**ALTERNATOR ASSEMBLY**  
**45 AMPERE - 24 VOLT**

REF	PART NO.	DESCRIPTION	REQ'D.
	A186124	ALTERNATOR ASSEMBLY - 24 volt, 45 amperes, Bosch No. 0 120 489 481, type K1-28V 3/45A.....	1
1	A187509	HOUSING - collector ring end .....	1
2	A187505	REGULATOR - voltage.....	1
3	NSS	SPRING - compression .....	2
4	NSS	BRUSH ASSEMBLY - alternator .....	1
5	A186194	BOLT - voltage regulator retaining.....	2
6	A186195	CAPACITOR - alternator.....	1
7	625589C1	SCREW - fillister head, capacitor retaining.....	1
8	A186196	WASHER - retaining screw.....	1
9	3079135R1	KIT - hardware, terminal.....	1
10	3079386R1	O-RING - ball bearing seal, housing .....	1
11	A187507	BRIDGE - rectifier, alternator, includes hardware.....	1
12	A187504	BOLT - with washer, rectifier bridge retaining .....	3
13	A187506	STATOR ASSEMBLY - alternator .....	1
14	A186186	BEARING - ball, rotor, collector ring end.....	1
15	A187503	RING - collector.....	1
16	A187502	ROTOR ASSEMBLY - alternator.....	1
17	3078379R1	PLATE - bearing retaining, drive end cover.....	1
18	A186183	BEARING - ball, rotor, drive end.....	1
	3078897R1	KIT - rotor retaining, includes key which is not used with A186124 alternator .....	1
19	NSS	RING - spacer.....	1
20	NSS	WASHER - lock, rotor shaft.....	1
21	NSS	NUT - rotor shaft.....	1
22	NSS	KEY - pulley retainer .....	1
23	NSS	SCREW - bearing retaining plate .....	4
24	A187501	COVER - drive end.....	1
25	A186193	BOLT - cover retaining .....	4
26	221425R1	FAN - alternator .....	1
27	J908560	PULLEY - drive.....	1
28	J908563	RETAINER - pulley .....	1

**1085C Cruz-Air Excavator**  
**RELAY PANEL AND HARNESSSES**

REF	PART NO.	DESCRIPTION	REQ'D.
1	S517650	PANEL - relay mounting.....	1
2	L114612	COVER - relay panel.....	1
3	L114195	SPACER - cover to panel ..	1
4	413-412	BOLT - hex, 1/4 NC x 3/4 inch ..	6
5	492-11025	WASHER - lock, 1/4 inch ..	6
6	495-21031	WASHER - flat, 5/16 x 47/64 x 1/16 inch ..	1
7	S619492	HARNESS - chassis power relay.....	1
8	70-11010	SCREW - machine, pan slotted, No. 10 NC x 5/8 inch ..	2
9	S243589	RELAY - chassis power .....	1
10	F22316	RESISTOR - 75 ohm ..	1
11	413-420	BOLT - hex, 1/4 NC x 1-1/4 inch ..	1
12	495-11028	WASHER - flat, 9/32 x 5/8 x 1/16 inch ..	3
13	L115883	RELAY - starter.....	1
14	S243558	BREAKER - circuit, 12-1/2 amp .....	1
15	S243504	HARNESS - starter and swivel.....	1
16	L114028	BAR - connector, circuit breaker ..	1
17	L114058	WIRE - jumper, bar to starter relay .....	1
18	S243561	BREAKER - circuit, 40 amp ..	1
19	493-11020	WASHER - lock, external tooth, No. 10 ..	6
20	225-14110	NUT - hex, machine screw, No. 10 NC.....	1
21	225-10210	NUT - hex, No. 10 NF .....	4
22	140-110	SCREW - machine, pan Phillips, No. 10 NC x 7/8 inch. ....	4
23	93-41020	WASHER - internal tooth lock, 3/16 inch.....	4

1085C Cruz-Air Excavator  
**RIGHT-HAND CONSOLE ELECTRICAL PANEL**  
 Switches And Fuses

REF	PART NO.	DESCRIPTION	REQ'D.
1	S619549	HARNESS - cab, see page 4-17 for continuation of harness .....	1
2	70-11012	SCREW - machine, pan, slotted, No. 10 NC x 3/4 inch .....	4
3	S117167	NUT - U-type, No. 10 NC ..	4
4	S619448	BRACKET - mounting, fuse block, see page 4-23 for related console parts .....	1
5	A149798	FUSE - 5 ampere (Tan) .....	4
6	A149799	FUSE - 7.5 ampere (Brown) .....	3
7	A149800	FUSE - 10 ampere (Red).....	5
8	S243178	PLATE - mounting, switch panel.....	1
9	163-39	SCREW - machine, hex washer head, No. 10 NC x 3/4 inch.....	4
10	S957062	CONSOLE - switch panel plate, see page 4-23 for related console parts ....	1
11	A187581	PANEL - mounting, rocker switch.....	5
12	A187870	LAMP - warning, master and low brake pressure.....	1
13	A187870	LAMP - warning, parking brake and steering pressure .....	1
14	*A187762	SWITCH - rocker, front axle oscillation lock .....	1
15	926645C1	BULB - W5/1,2 24V1, 2W, not shown.....	1
16	*A187799	SWITCH - rocker, transmission range ..	1
17	926645C1	BULB - W5/1,2 24V1, 2W, not shown.....	1
18	*A187762	SWITCH - rocker, parking brake .....	1
19	926645C1	BULB - W5/1,2 24V1, 2W, not shown... ..	1
20	*A187622	SWITCH - rocker, ether cold start .....	1
21	926645C1	BULB - W5/1,2 24V1, 2W, not shown.....	1
22	*A187796	SWITCH - rocker, front lamp .....	1
23	926645C1	BULB - W5/1,2 24V1, 2W, not shown. . . . .	1
24	*A187796	SWITCH - rocker, work lamp, if used.. ..	1
25	926645C1	BULB - W5/1,2 24V1, 2W, not shown.....	1
26	*A187882	SWITCH - rocker, left front outrigger, if used.....	1
27	926645C1	BULB - W5/1,2 24V1, 2W, not shown....	1
28	*A187882	SWITCH - rocker, right front outrigger, if used.....	1
29	926645C1	BULB - W5/1,2 24V1, 2W, not shown.....	1
30	*A187621	SWITCH - rocker, windshield wiper .....	1
31	926645C1	BULB - W5/1,2 24V1, 2W, not shown... ..	1
32	*A187882	SWITCH - rocker, left rear outrigger .....	1
33	926645C1	BULB - W5/1,2 24V1, 2W, not shown.....	1
34	*A187882	SWITCH - rocker, right rear outrigger.....	1
35	926645C1	BULB - W5/1,2 24V1, 2W, not shown.....	1
36	*A187622	SWITCH - rocker, windshield washer, if used.....	1
37	926645C1	BULB - W5/1,2 24V1, 2W, not shown.....	1
38	245918C1	PLUG - rocker switch, used in panel when rocker switch is not required.....	UAR

**\*NOTE:** See page 9-93 for rocker switch decals.

1085C Cruz-Air Excavator  
ELECTRICAL SWIVEL

4-35

REF	PART NO.	DESCRIPTION	REQ'D.
	A187834	SWIVEL ASSEMBLY - electrical .....	1
1	A191104	HARNESS - electrical swivel, upper.....	1
2	A191105	HARNESS - electrical swivel, lower .....	1
3	A191106	BRUSH - contact, large, 45 amp, includes brushes, arms, spring and wire leads ... ..	2
4	A191107	BRUSH - contact, small, 10 amp, includes brushes, arms, spring and wire leads .....	22
5	A191108	SEAL - cover to base plate .....	1
6	NSS	NUT - hex, cover and stud retaining.....	4
7	NSS	COVER - swivel contact ring and brushes ... ..	1
8	NSS	STUD - retaining, brushes.....	2
9	NSS	COLLAR - retaining, brushes and plate, includes set screw .....	4
10	NSS	PLATE - upper, swivel .....	1
11	NSS	SWIVEL - electrical, includes contact rings, base plate, and mounting flange ... ..	1
12	NSS	ELBOW - strain relief, includes nut and seal.....	1
13	NSS	SPACER - retaining stud .....	2
14	NSS	WASHER - special, stud .....	2
15	L18337	STRAP - nylon retaining .....	UAR
16	413-820	BOLT - hex, 1/2 NC x 1-1/4 inch .....	1
17	425-148	NUT - hex, jam, 1/2 inch NC .....	1
18	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch .....	3
19	492-11038	WASHER - lock, 3/8 inch .....	3
20	L18337	STRAP - nylon, retaining .....	UAR
21	S619599	HARNESS - extension, for swivel, 30 inch and 60 inch cab riser.....	1
22	245329C1	CONNECTOR - at swivel harness .....	1
23	245330C1	CONNECTOR - at cab harness .....	1

1085C Cruz-Air Excavator  
**LIQUID PROPANE FIRED HEATER**  
**TANK AND MOUNTING PARTS**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	131-69	NUT - hex, self-locking, 5/16 inch NC.....	4
2	S515088	GUARD - exhaust tube .....	1
3	S239724	TUBE - exhaust .....	1
4	S120259	CLAMP - tube, includes lockwashers and hex nuts .....	2
5	413-516	BOLT - hex, 5/16 NC x 1 inch .....	4
6	495-11034	WASHER - flat, 11/32 x 11/16 x 1/16 inch .....	4
7	S515086	PAN - heater, rear .....	1
8	S239725	HOSE - rubber, air intake .....	1
9	214-256	CLAMP - hose, 13/16 to 1-3/4 inch.....	1
10	S118178	ELBOW - 90 degree.....	1
11	218-448	ADAPTER - straight, 1-5/16-12 flare x 1 inch PT .....	1
12	222-1927	ELBOW - 90 deg, 5/8-18 inch 45 deg flare x 45 deg fl swivel.....	1
13	S120263	GROMMET - hose.....	1
14	S117712	HOSE - 168 inch long, tank to heater .....	1
15	L18337	STRAP - nylon, retaining.....	UAR
16	222-910	ADAPTER - 5/8-18 45 deg flare x 3/8 inch PT, brass.....	1
17	NSS	REGULATOR - tank pressure, order S300325 regulator kit which also includes a connector with excess flow valve, see items 23 and 24 below .....	1
18	REF	TANK - L.P., obtain locally from gas dealer.....	1
19	S515258	BRACKET - tank.....	1
20	131-52	NUT - hex, self-locking, 3/8 inch NC.....	4
21	495-11041	WASHER - flat, 13/32 x 13/16 x 1/16 inch .....	4
22	495-11053	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch, used as spacer.....	8
	S300325	KIT - service, pressure regulator .....	1
23	NSS	CONNECTOR - includes excess flow valve.....	1
24	NSS	REGULATOR - pressure.....	1

**NOTE:** For heater assembly gas and air lines see page 4-41.

1085C Cruz-Air Excavator  
**WINDSHIELD WASHER**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	S117715	NOZZLE - windshield washer .....	1
2	S117556	TUBE - 73 inch long, elbow to nozzle.....	1
3	1968053C1	CONNECTOR - bulkhead, 90 degree .....	1
4	388725R1	TUBE - 17 inch long, connector to pump .....	1
5	S117698	PUMP - windshield washer, component parts not sold separately.....	1
6	S117557	TUBE - 10 inch long, reservoir to pump, cut from S117556, item 2.....	1
7	S515124	RESERVOIR - windshield washer .....	1
8	S118706	WIRE - 6 inch long, pump ground .....	1
9	S118704	WIRE - 23 inch long, washer pump to cab harness.....	1
10	S243764	PLATE - mounting, reservoir and washer pump .....	1
11	463-1108	SCREW - machine, hex, No. 10 NC x 1/2 inch.....	6

## LOWER STEERING HYDRAULIC CIRCUIT

### HYDRAULIC SWIVEL TO STEERING AND CONTROL PUMP

REF.	PART NO.	DESCRIPTION	REQD.
1	218-5119	ELBOW - 90 degree adj, 7/8-14 flare x 1-1/16-12 inch O-ring.....	1
2	237-6012	O-RING - 59/64 ID x 7/64 inch wide.....	1
3	S8577	HOSE - 20 inch long, at swivel port 6.....	1
4	218-5220	TEE - 7/8-14 inch flare branch x flare x adj straight thread.....	1
5	218-5066	ADAPTER - straight, 7/8-14 flare x 3/4-16 inch O-ring boss.....	1
6	237-6008	O-RING - 41/64 ID x 3/32 inch wide.....	1
7	S8582	HOSE - 60 inch, from steering and control pump to swivel port 6.....	1
8	218-785	REDUCER - 1-1/16-12 fem straight thread x 7/8-14 inch flare.....	1
9	218-5118	ELBOW - 90 deg adj, 1-1/16-12 flare x 1-5/16-12 inch O-ring.....	1
10	237-6016	O-RING - 1-11/64 ID x 7/64 inch.....	1
11	218-5059	ADAPTER - straight, 3/4-16 inch flare x O-ring boss.....	1
12	237-6008	O-RING - 41/64 ID x 3/32 inch wide.....	1
13	218-845	TEE - 3/4-16 inch flare branch x flare x adj straight thread.....	1
14	D54320	HOSE - 12 inch long, to lower manifold valve.....	1
15	218-5113	ELBOW - 90 degree adj, 1-7/8-12 inch flare x O-ring boss.....	1
16	237-6024	O-RING - 1-23/32 ID x 1/8 inch wide.....	1
17	S517774	TUBE - at steering control pump.....	1
18	214-382	CLAMP - hose.....	4
19	L127301	HOSE - 222 mm long, intermediate.....	2
20	S517772	TUBE - intermediate.....	2
21	218-480	ELBOW - 90 degree, 1-7/8-12 inch flare.....	1
22	S517770	TUBE - to hose at hydraulic reservoir.....	1
23	S98324	CLAMP - tube, includes hardware.....	1
24	1978376C1	PUMP ASSEMBLY - steering and control, parts list page 5-19.....	1
25	218-5121	ELBOW - 90 degree adj, 3/4-16 flare x 7/8-14 inch O-ring.....	1
26	237-6010	O-RING - 3/4 ID x 3/32 inch wide.....	1
27	S243639	HOSE - 1550 mm long, at steering and control pump.....	1
28	218-346	NUT - hex, 1-1/16-12 inch.....	2
29	218-796	REDUCER - 3/4 tube OD x 3/4-16 inch flare.....	2
30	218-5585	TEE - 1-1/16-12 fl branch x fl x 1-5/16-12 inch adj O-ring.....	1
31	237-6016	O-RING - 1-11/64 ID x 7/64 inch.....	1
32	413-824	BOLT - hex, 1/2 NC x 1-1/2 inch.....	2
33	492-11050	WASHER - lock, 1/2 inch.....	2
34	496-31053	WASHER - flat, 17/32 x 1-1/16 x 3/16 inch, hardened.....	2
35	T42284	CLAMP - hose, uses transmission mounting hardware.....	1
36	S11226	HOSE - 20 inch long, at swivel port 4.....	1
37	218-5120	ELBOW - 90 degree adj, 3/4-16 flare x 1-1/16-12 inch O-ring.....	1
38	237-6012	O-RING - 59/64 ID x 7/64 inch wide.....	1
39	S619177	SWIVEL ASSEMBLY - lower hydraulic, parts list page 8-61.....	1
40	S517869	VALVE ASSEMBLY - lower manifold, parts list page 8-119.....	1
41	218-5232	ELBOW - 90 degree, 7/8-14 inch flare x swivel flare.....	1

**NOTE:** For the front axle lockout hydraulic system and lower manifold valve mounting, see page 8-117.

1085C Cruz-Air Excavator  
**STEERING AND CONTROL PUMP**

REF.	PART NO.	DESCRIPTION	REQ'D.
	1978376C1	PUMP ASSEMBLY - steering and control, see page 5-9 for mounting hardware.....	1
1	145587C1	SEAL - lip.....	1
2	309107R1	RING - retaining.....	1
3	NSS	HOUSING - pump.....	1
4	1263234C1	SHAFT - drive.....	1
5	1263235C1	YOKE - swing.....	1
6	A47302	PLATE - wafer.....	1
7	1263237C1	SPRING - yoke.....	1
	A49787	KIT - rotating group.....	1
8	NSS	PISTON - pump.....	9
9	NSS	PLATE - piston shoe.....	1
10	NSS	WASHER - spherical.....	1
11	NSS	BLOCK - cylinder.....	1
12	NSS	PIN - cylinder block.....	3
13	NSS	RETAINER - pin.....	1
14	NSS	WASHER - spring, front.....	1
15	NSS	SPRING - cylinder block.....	1
16	NSS	RING - retaining.....	1
17	NSS	WASHER - spring, notched ID.....	1
	1263241C1	KIT - yoke bearing.....	1
18	NSS	BEARING - yoke.....	2
19	NSS	KIT - shim.....	1
	1263242C1	KIT - shaft bearing.....	1
20	NSS	BEARING - shaft, yoke end.....	1
21	NSS	BEARING - shaft, valve block end.....	1
	145582C91	KIT - spacer.....	1
22	NSS	SPACER - bearing, 0.139 inch.....	UAR
22	NSS	SPACER - bearing, 0.142 inch.....	UAR
22	NSS	SPACER - bearing, 0.145 inch.....	UAR
22	NSS	SPACER - bearing, 0.148 inch.....	UAR
22	NSS	SPACER - bearing, 0.151 inch.....	UAR
22	NSS	SPACER - bearing, 0.154 inch.....	UAR
22	NSS	SPACER - bearing, 0.157 inch.....	UAR
22	NSS	SPACER - bearing, 0.160 inch.....	UAR
22	NSS	SPACER - bearing, 0.163 inch.....	UAR
22	NSS	SPACER - bearing, 0.166 inch.....	UAR
22	NSS	SPACER - bearing, 0.169 inch.....	UAR
23	*NSS	O-RING - cover.....	2
24	*NSS	GASKET - compensator to pump.....	1
25	*NSS	GASKET - valve block.....	1
26	*NSS	O-RING - piston rod.....	2
	*1263244C2	KIT - O-ring, seal and gasket, includes all items marked with an asterisk on this page and pages 5-21 and 5-23.....	1

Continued on next page

1085C Cruz-Air Excavator  
**STEERING CYLINDER**

5-29

REF.	PART NO.	DESCRIPTION	REQ'D.
	1978348C3	CYLINDER ASSEMBLY - 2-3/4 (70) ID x 10 inch (255 mm) stroke, steering.....	2
1	1978352C1	TUBE - cylinder .....	1
2	28-1028	BOLT - hex, 5/8 NF x 1-3/4 inch, grade 8.....	1
3	D43266	WASHER - flat, 21/32 x 1-5/16 x 9/64 inch, hardened.....	1
4	1346135C1	PISTON - cylinder.....	1
5	G105187	RING - wear, piston.....	1
6	*G104439	RING - seal, inner.....	1
7	*G104454	SEAL - piston.....	1
	G108983	GLAND ASSEMBLY - cylinder.....	1
8	G102864	BUSHING - gland .....	1
9	*238-5230	O-RING - 2-1/2 ID x 1/8 inch wide.....	1
10	*G32129	RING - backup, gland O-ring.....	1
11	*G109092	SEAL - piston rod, narrow.....	1
12	NSS	GLAND - cylinder.....	1
13	*D36968	SEAL - piston rod, wide.....	1
14	*D95141	WIPER - piston rod, outer.....	1
	1978355C1	ROD ASSEMBLY - piston, cylinder, 1-1/4 inch (32 mm) diameter .....	1
15	NSS	ROD - piston, cylinder .....	1
16	276-2446	SCREW - hex, self tapping, No. 8 NC x 3/8 inch.....	1
	*G110047	KIT - seal, includes all items with an asterisk .....	1

**TRANSMISSION HYDRAULICS**  
**TORQUE CONVERTER AND TRANSMISSION LINES**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	217-361	FITTING - stem, 90 deg, 3/4 hose ID x 7/8-14 inch adj O-ring.....	2
2	237-6010	O-RING - 3/4 ID x 3/32 inch wide.....	1
3	214-255	CLAMP - adj, 13/16 to 1-1/2 inch dia.....	4
4	S120622	HOSE - 3/4 (19) x 1-1/4 (32) x 112 inch (2849 mm) long, radiator to transmission, cut from S118382, see below.....	1
5	217-351	ELBOW - 90 degree, 3/4 stem end x 1-1/16-12 inch O-ring.....	1
6	237-6012	O-RING - 59/64 ID x 7/64 inch wide.....	1
7	S119452	HOSE - 3/4 (19) x 1-1/4 (32) x 70 inch (1778 mm) long, radiator to torque converter, cut from S118382, see below.....	1
8	217-315	ELBOW - 45 degree, adj, 3/4 stem end x 1-1/16-12 inch O-ring.....	1
9	237-6012	O-RING - 59/64 ID x 7/64 inch wide.....	1
10	S619354	CONVERTER ASSEMBLY - torque, parts list pages 6-3 through 6-7.....	1
11	414-628	BOLT - hex, 3/8 NF x 1-3/4 inch.....	8
12	492-11038	WASHER - lock, 3/8 inch.....	8
13	814-10040	BOLT - hex, 10 mm - 1.5 x 40 mm.....	12
14	892-11010	WASHER - lock, 10 mm.....	12
15	218-5059	ADAPTER - straight, 3/4-16 inch flare x O-ring boss.....	1
16	237-6008	O-RING - 41/64 ID x 3/32 inch wide.....	1
17	S11230	HOSE - 28 inch (711 mm) long, torque converter to transmission.....	1
18	L18337	STRAP - tie, 15-7/16 inch long.....	UAR
19	218-5106	ELBOW - 90 degree, adj, 3/4-16 inch flare x O-ring boss.....	1
20	237-6008	O-RING - 41/64 ID x 3/32 inch wide.....	1
21	217-136	ELBOW - 90 degree, 1 inch stem end x PT.....	2
22	214-378	CLAMP - adj, 1-13/32 to 1-9/16 inch dia.....	4
23	S121069	HOSE - 1 (25) x 1-1/2 (38) x 32 inch (813 mm) long, torque converter to transmission, cut from S118383, see below.....	1
24	217-316	ELBOW - 45 degree, 1 stem end x 1-5/16-12 inch adj O-ring.....	1
25	237-6016	O-RING - 1-11/64 ID x 7/64 inch wide.....	1
26	S120214	HOSE - 1 (25) x 1-1/2 (38) x 34 inch (864 mm) long, torque converter to transmission, cut from S118383, see below.....	1
27	S517788	TUBE - at transmission.....	1
28	218-448	ADAPTER - straight, 1-5/16-12 flare x 1 inch PT.....	1
	S118382	HOSE - 3/4 (19) x 1-1/4 (32) x 240 inch (6096 mm) long.....	UAR
	S118383	HOSE - 1 (25) x 1-1/2 (38) x 192 inch (4877 mm) long.....	UAR

Continued on next page

## TRANSMISSION

## OUTPUT FLANGES AND HIGH-LOW SHIFT COMPONENTS

REF.	PART NO.	DESCRIPTION	REQ'D.
	S619636	TRANSMISSION ASSEMBLY - parts list pages 6-15 through 6-27 .....	1
1	N7207	RETAINER - bearing.....	1
2	N7206	GASKET - bearing retainer.....	1
5	131-487	NUT - hex, self-locking, 1-1/4 inch NF .....	1
6	A55828	WASHER - special, flange.....	1
7	A30916	O-RING - flange.....	1
8	S300024	FLANGE - output, driveshaft to front axle.....	1
9	E114371	NUT - special, bearing retainer stud.....	4
10	192-24	WASHER - lock, 9/16 inch .....	4
11	N7210	STUD - output bearing retainer .....	4
12	D87228	SEAL - oil, bearing .....	1
13	D87243	BEARING - ball, output shaft, rear.....	1
14	D87240	WASHER - thrust, high range gear.....	1
15	S301107	GEAR - high range.....	1
16	D87239	BEARING - roller, output shaft, rear.....	2
17	S301106	SHAFT - output, transmission.....	1
18	D87237	ROD - high-low shift.....	1
19	A17958	SCREW - set, special, high-low shift rod.....	1
20	S117898	FORK - high-low shift.....	1
21	S117899	HUB - shift.....	1
22	D87239	BEARING - ball, low gear.....	2
23	D87238	SPACER - bearing.....	1
24	D87232	GEAR - low range .....	1
25	D87240	WASHER - thrust, low range gear .....	1
26	E114340	BEARING - ball, output shaft, front.....	1
27	D77023	SEAL - oil, output flange .....	1
28	S300024	FLANGE - output, driveshaft to rear axle.....	1
29	A30916	O-RING - flange.....	1
30	A55828	WASHER - special, flange.....	1
31	131-487	NUT - hex, self-locking, 1-1/4 inch NF .....	1
32	N13104	SEAL - oil.....	1
33	S117872	PLUG - housing detent .....	1
34	211-12	BALL - 7/16 inch, grade 200, chrome alloy steel.....	1
35	S89686	SPRING - detent.....	1
36	A30915	O-RING - range shift housing .....	1
37	S117901	STUD - range shift rod housing.....	2
38	S89684	HOUSING - high-low shift rod.....	1
39	492-11038	WASHER - lock, 3/8 inch .....	2
40	129-103	NUT - hex, 3/8 inch NC.....	2

NOTE: See page 6-61 for high-low shift hydraulic lines.

1085C Cruz-Air Excavator  
**FRONT STEERING AXLE MOUNTING**

6-29

REF	PART NO.	DESCRIPTION	REQD.
1	S517957	AXLE ASSEMBLY - front steering, parts list page 6-31 through 6-39, and 7-3 .....	1
2	1978348C3	CYLINDER ASSEMBLY - steering, parts list page 5-29 .....	2
3	S243431	PIN - cylinder.....	4
4	413-452	BOLT - hex, 1/4 NC x 3-1/4 inch.....	4
5	131-71	NUT - hex self-locking, 1/4 inch NC.....	4
6	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long .....	2
7	413-12144	BOLT - hex, 3/4 NC x 9 inch .....	8
8	S94643	WASHER - flat, special .....	16
9	131-16	NUT - hex, self-locking, 3/4 inch NC.....	8

**NOTE:** See page 9-23, item 10, for the axle mounting bracket.

**1085C Cruz-Air Excavator  
FRONT STEERING AXLE  
DIFFERENTIAL**

**6-39**

REF	PART NO.	DESCRIPTION	REQ'D.
	S517957	AXLE ASSEMBLY - front steering, continued from page 6-37, part lists pages 6-31 through 6-39, and 7-3 .....	1
22	828-16100	BOLT - hex, 16 mm - 2 x 100 mm .....	1
23	895-11016	WASHER - flat, 18 x 30 x 3 mm .....	1
24	S301216	COVER - carrier .....	1
25	895-11006	WASHER - flat, 7 x 13 x 2 mm .....	4
26	S301313	BOLT - hex, special, cover to carrier .....	4
27	732-3232	PIN - cotter, 3 x 32 mm, cap .....	1
	S301208	GEAR SET - ring and pinion .....	1
28	NSS	GEAR - ring.....	1
29	NSS	GEAR AND SHAFT - pinion.....	1
30	S301311	NUT - hex, slotted .....	1
31	S301213	BEARING - roller.....	1
	S301220	CAGE ASSEMBLY - differential .....	1
32	NSS	CAGE - differential .....	1
33	NSS	COVER - differential.....	1
34	814-12130	BOLT - hex, 12 mm - 1.75 x 130 mm.....	12
35	S301224	SHAFT - cross .....	1
36	A18175	GEAR - pinion, differential .....	4
37	S301225	WASHER - thrust, pinion gear .....	4
38	S301223	GEAR - side, differential .....	2
39	S301222	WASHER - thrust, side gear .....	2
40	S301227	CUP - tapered roller bearing, outer, cage end.....	1
41	S301228	RING - bearing adjustment, cage end.....	1
42	S301226	BEARING - tapered roller, cage end .....	1
43	S301314	BOLT - special, gear to cage.....	12
44	S301315	NUT - hex, special.....	12
45	S301218	CUP - tapered roller bearing, outer, cover end.....	1
46	S301217	RING - bearing adjustment, cover end.....	1
47	S301219	BEARING - tapered roller, cover end.....	1

## REAR DRIVE AXLE

## DIFFERENTIAL

REF	PART NO.	DESCRIPTION	REQ'D.
	S517955	AXLE ASSEMBLY - rear drive, continued from page 6-47, parts list pages 6-43 through 6-49, 7-5 and 7-7.....	1
	S517956	AXLE ASSEMBLY - rear drive with no-spin, continued from page 6-47, parts list pages 6-43 through 6-49, 7-5, and 7-7.....	1
21	828-16100	BOLT - hex, 16 mm - 2 x 100 mm .....	1
22	895-11016	WASHER - flat, 18 x 30 x 3 mm .....	1
23	S301216	COVER - carrier.....	1
24	895-11006	WASHER - flat, 7 x 13 x 2 mm .....	4
25	S301313	BOLT - hex, special, cover to carrier.....	4
26	732-3232	PIN - cotter, 3 x 32 mm, cap.....	1
	S301208	GEAR SET - ring and pinion.....	1
27	NSS	GEAR - ring.....	1
28	NSS	GEAR AND SHAFT - pinion.....	1
29	S301311	NUT - special, slotted .....	1
30	S301213	BEARING - roller.....	1
	S301220	CAGE ASSEMBLY - differential, S517955 rear axle only.....	1
31	NSS	CAGE - differential.....	1
32	NSS	COVER - differential.....	1
33	814-12130	BOLT - hex, 12 mm - 1.75 x 130 mm.....	12
34	S301224	SHAFT - cross .....	1
35	A18175	GEAR - pinion, differential.....	4
36	S301225	WASHER - thrust, pinion gear.....	4
37	S301223	GEAR - side, differential.....	2
38	S301222	WASHER - thrust, side gear.....	2
39	S301227	CUP - tapered roller bearing, outer, cage end.....	1
40	S301228	RING - bearing adjustment, cage end.....	1
41	S301226	BEARING - tapered roller, cage end.....	1
42	S301314	BOLT - special, gear to cage.....	12
43	S301315	NUT - hex, special.....	12
44	S301218	CUP - tapered roller bearing, outer, cover end.....	1
45	S301217	RING - bearing adjustment, cover end.....	1
46	S301219	BEARING - tapered roller, cover end.....	1
	S301267	CAGE ASSEMBLY - differential, S517956 no-spin rear axle only.....	1
47	NSS	CAGE - differential.....	1
48	NSS	COVER - differential.....	1
49	814-12130	BOLT - hex, 12 mm - 1.75 x 130 mm.....	12
50	S301222	WASHER - thrust, side gear.....	2
	S301266	SPIDER AND GEAR ASSEMBLY - no-spin .....	1
51	L35997	SPIDER - differential.....	1
52	L35998	GEAR - side, inner .....	2
53	L36000	SPRING - spider.....	2
54	A44688	RETAINER - spring .....	2
55	S301268	GEAR - side, outer.....	2

NOTE: The rear axle yoke is shown on page 7-7, item 10.

1085C Cruz-Air Excavator  
**TRANSMISSION SHIFT CONTROL**

6-59

REF	PART NO.	DESCRIPTION	REQD.
	S517830	CONTROL ASSEMBLY - transmission shift .....	1
1	NSS	LEVER - transmission shift.....	1
2	NSS	COVER - slotted .....	1
3	NSS	PLATE - cover, shift control and lamp.....	1
4	S301169	LENS - lamp .....	1
5	S119827	BULB - lamp, G.E. No. 313 .....	1
6	S301170	HARNESSESS - transmission shift control, connects to main cab harness, item 1, page 4-17.....	1
7	S301343	BRACKET - outer, control mounting .....	1
8	131-1405	NUT - hex, self-locking, No. 10 NF.....	4
9	NSS	BRACKET - switch, lower .....	1
10	13-414	BOLT - hex, 1/4 NC x 7/8 inch.....	2
11	S301168	SPACER - bracket, upper to lower .....	2
12	425-104	NUT - hex, 1/4 inch NC.....	7
13	S301167	BRACKET - inner, leaf spring mounting .....	1
14	S301172	SPRING - leaf .....	1
15	413-48	BOLT - hex, 1/4 NC x 1/2 inch.....	5
16	S301174	NUT - special, switch retaining .....	5
17	S301171	SWITCH - transmission shift control.....	5
18	214-1204	CLAMP - harness, 1/2 - 5/8 inch dia., shift control harness .....	1
19	182-88	SCREW - Phillips pan head, No. 8 NC x 3/4 inch.....	1
20	131-552	NUT - light hex, self-locking, No. 8 NC .....	1

**REAR AXLE  
PARKING BRAKE**

REF	PART NO.	DESCRIPTION	REQD.
	S517955	AXLE - rear, also includes parts on pages 6-43 through 6-49, and 7-5 .....	1
	S517956	AXLE - rear, no-spin, also includes parts on pages 6-43 through 6-49, and 7-5 .....	1
	NSS	BRAKE ASSEMBLY - parking.....	1
	S301229	SHOE AND LINING ASSEMBLY - parking brake.....	2
1	S301230	RIVET - lining to shoe .....	12
2	S301231	LINING - brake shoe.....	1
3	S301232	SHOE - parking brake .....	1
4	26-1026	BOLT - hex, 5/8 NC x 1-5/8 inch, grade 8.....	4
5	232049R11	PLATE - backing.....	1
6	S301233	LEVER - actuating.....	1
7	S301316	WASHER - special, lever .....	1
8	131-12	NUT - hex, self-locking, 9/16 inch NC .....	1
9	233009R1	SPRING - shoe return.....	4
10	S301234	YOKE - brake drum .....	1
11	S301235	DRUM - parking brake .....	1
12	26-620	BOLT - hex, 3/8 NC x 1-1/4 inch.....	8
13	N13566	WASHER - special, drum to flange.....	8
14	233010R11	BRACE - backing plate.....	1
15	S301236	CAMSHAFT - lever.....	1

## LOWER BRAKE SYSTEM

### UPPER SWIVEL HOSE TO BRAKE CALIPERS

REF.	PART NO.	DESCRIPTION	REQ'D.
1	A12988	GASKET - adapter .....	2
2	S66382	ADAPTER - hydraulic brake hose.....	2
3	S243602	HOSE - 625 mm long, front, calipers to tube .....	2
4	218-671	ADAPTER - bulkhead, 7/16-20 inch flare x bulkhead flare .....	2
5	218-1252	NUT - hex, lock, bulkhead, 7/16 inch NF .....	2
6	S243615	TUBE - brake, right-hand front .....	1
7	S243617	TUBE - brake, left-hand front.....	1
8	A12452	MANIFOLD - brake tube .....	2
9	495-11053	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch .....	8
10	49851	CLAMP - harness, 6.35 mm ID.....	8
11	131-217	NUT - hex, self-locking, 3/8 inch NC, grade 8 .....	8
12	S517918	TUBE - brake, front .....	1
13	S517917	TUBE - brake, center .....	1
14	S243604	TUBE - brake, rear .....	1
15	S243528	TEE - special, connects hose from port No. 5 on inner swivel to center and rear brake tubes .....	1
16	218-5478	TEE - 7/16-20 inch flare branch x fl x adj straight thread.....	1
17	218-1562	ADAPTER - straight, 7/16-20 fem swivel x 1/4 inch fem PT .....	1
18	221-84	REDUCER - 1/4 x 1/8 inch PT .....	1
19	S243429	SWITCH - brake ... ..	1
20	S243613	TUBE - brake, right-hand rear .....	1
21	S243608	TUBE - brake, left-hand rear.....	1
22	A18531	FITTING - special, rear tubes to brake housing.....	2
23	A12864	BOLT - special, fitting .....	2
24	33261	GASKET - outer.....	2
25	L114099	GASKET - inner (next to brake housing).....	2

**1085C Cruz-Air Excavator**  
**HYDRAULIC OIL COOLER LINES**

REF	PART NO.	DESCRIPTION	REQ'D
1	A189146	COOLER - hydraulic oil, see page 2-5, items 42 through 44 for mounting hardware	1
2	214-372	CLAMP - hose	16
3	*S121101	HOSE - 1-1/2 (38) x 2 (51) x 9 inch (222 mm), cut from S120500 bulk hose, see below	7
4	S517777	TUBE - intermediate, to oil cooler	1
5	S517775	TUBE - intermediate, from manifold	1
6	S231593	TUBE - at manifold	1
7	218-5072	ADAPTER - straight, 1-5/8-12 inch flare x O-ring boss	1
8	237-6020	O-RING - 1-15/32 ID x 1/8 inch wide	1
9	S517533	MANIFOLD - block	1
10	218-5112	ELBOW - 90 degree adj, 1-5/8-12 inch flare x O-ring boss	1
11	237-6020	O-RING - 1-15/32 ID x 1/8 inch wide	1
12	218-5072	ADAPTER - straight, 1-5/8-12 inch flare x O-ring boss	1
13	237-6020	O-RING - 1-15/32 ID x 1/8 inch wide	1
14	S517545	TUBE - at swivel port 8	1
15	218-5334	ELBOW - 90 degree adj, 1-5/8-12 flare x 1-7/8-12 inch O-ring	2
16	237-6020	O-RING - 1-15/32 ID x 1/8 inch wide	1
17	S619177	SWIVEL ASSEMBLY - lower hydraulic, parts list page 8-61	1
18	S517543	TUBE - at swivel port 1	1
19	218-5161	PLUG - hex, 1-5/8-12 inch O-ring boss	1
20	237-6020	O-RING - 1-15/32 ID x 1/8 inch wide	1
21	S98324	CLAMP - tube, includes hardware	5
22	S517779	TUBE - intermediate, from oil cooler	1
23	S517780	TUBE - intermediate, to hydraulic reservoir	1
24	S517782	TUBE - to oil filter	1
25	1971539C1	FILTER ASSEMBLY - hydraulic oil, parts list page 8-5	1
26	L53821	O-RING - oil filter	2
27	S517784	TUBE - from filter to hydraulic reservoir	1
28	413-820	BOLT - hex, 1/2 NC x 1-1/4 inch	8
29	A14157	FLANGE - split	4
30	413-616	BOLT - hex, 3/8 NC x 1 inch	4
31	492-11038	WASHER - lock, 3/8 inch	4
32	495-11041	WASHER - flat, 13/32 x 13/16 x 1/16 inch	4
	S105386	VALVE ASSEMBLY - check	1
33	NSS	BODY - check valve	1
34	A13084	O-RING - check valve, not shown	1
35	S231593	TUBE - crossover	2
36	*S121102	HOSE - 1-1/2 (38) x 2 (51) x 11 inch (279 mm), cut from S120500 bulk hose, see below	1
	*S120500	HOSE - bulk, 1-1/2 (38) x 2 (51) x 34 inch (864 mm)	UAR

1085C Cruz-Air Excavator  
**ARM AND SWING CONTROL VALVE - 1978152C1**

8-17

REF	PART NO	DESCRIPTION	REQ'D
	1978152C1	VALVE ASSEMBLY - control, arm and swing. . . . .	1
	1986615C1	SECTION ASSEMBLY - inlet . . . . .	1
1	NSS	SECTION - inlet. . . . .	1
2	1978297C2	VALVE ASSEMBLY - main relief, parts list page 8-37 . . . . .	1
3	1978295C1	WASHER - special. . . . .	1
4	329-156	NUT - hex, jam, 3/4 NC, grade 8. . . . .	1
5	1986617C1	SECTION ASSEMBLY - swing, parts list page 8-21 . . . . .	1
6	1986622C1	SECTION ASSEMBLY - arm, parts list page 8-23 . . . . .	1
7	1986636C1	SECTION ASSEMBLY - auxiliary, parts list page 8-25 . . . . .	1
8	1986637C1	SECTION ASSEMBLY - auxiliary, parts list page 8-27 . . . . .	1
9	1986639C1	SECTION - outlet. . . . .	1
	1978320C1	KIT - seal, control valve, between sections . . . . .	1
10	370943R1	O-RING - small . . . . .	5
11	370944R1	O-RING - large. . . . .	15
12	1986640C1	ROD - special, tie, control valve . . . . .	4

HIGH-SPEED AUXILIARY SECTION - 1986637C1

REF	PART NO.	DESCRIPTION	REQ'D
	1986637C1	SECTION ASSEMBLY - auxiliary, high speed .....	1
1	NSS	HOUSING - auxiliary section .....	1
2	NSS	SPOOL - auxiliary section .....	1
3	61-32524	BOLT - hex socket, 1/4 NC x 1-1/2 inch .....	4
4	192-402	WASHER - SAE Hi Collar lock, 1/4 inch .....	4
5	NSS	CAP - spool guide end .....	1
6	375269R1	O-RING - cap .....	1
7	NSS	BOLT - special, spool guide .....	1
8	61-32524	BOLT - hex socket, 1/4 NC x 1-1/2 inch .....	4
9	192-402	WASHER - SAE Hi Collar lock, 1/4 inch .....	4
10	NSS	CAP - spring end .....	1
11	NSS	BOLT - special, spool positioner .....	1
12	NSS	SPACER - spring retainer .....	2
13	NSS	SPRING - spool positioner, large .....	1
14	NSS	SPRING - spool positioner, small .....	2
15	NSS	SPACER - spring .....	2
16	375269R1	O-RING - cap .....	1
17	NSS	PLUG - load check .....	1
18	237-6014	O-RING - 1-3/64 ID x 1/64 inch wide .....	1
19	NSS	POPPET - load check .....	1
20	NSS	SPRING - load check .....	1
	1978318C1	PLUG ASSEMBLY - no relief .....	2
21	NSS	PLUG - no relief .....	1
22	218-5009	O-RING - 1-3/64 ID x 7/64 inch wide, large .....	1
23	1978265C1	RING - backup .....	1
24	376769R1	O-RING - plug, small .....	1
	1978281C1	KIT - load check plug, contains items 17 through 20 .....	1
	1978284C2	KIT - positioner, spring end, contains items 8 through 15 .....	1
	1986638C1	KIT - positioner, spool guide end, contains items 3 through 7 .....	1

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CIRCUIT RELIEF VALVE AND MAIN RELIEF VALVE - 1978297C2

REF	PART NO	DESCRIPTION	REQD
	1978297C2	VALVE ASSEMBLY - circuit relief and main relief . . . . .	1
1	1978295C1	WASHER - special.. . . . .	1
2	25934R1	NUT - jam, hex, 3/8" - 24 NF. . . . .	1
3	NSS	SCREW - adjusting. . . . .	1
4	NSS	O-RING - adjusting screw. . . . .	1
5	NSS	SPRING - plunger .. . . . .	1
6	NSS	PLUNGER - relief valve .. . . . .	1
7	NSS	BODY - pilot plunger. . . . .	1
8	NSS	O-RING - pilot seat. . . . .	1
9	NSS	SEAT - pilot . . . . .	1
10	NSS	O-RING - body, large .. . . . .	1
11	NSS	O-RING - body, small. . . . .	1
12	NSS	RING - backup, O-ring . . . . .	1
13	NSS	SPRING - poppet .. . . . .	1
14	NSS	O-RING - poppet. . . . .	1
15	NSS	RING - backup, poppet O-ring .. . . . .	1
16	NSS	RING - retaining, screen .. . . . .	1
17	NSS	SCREEN - poppet .. . . . .	1
18	NSS	POPPET - relief valve .. . . . .	1
19	NSS	BODY - relief valve .. . . . .	1
20	237-6014	O-RING - 1-3/64 ID x 1/64 inch wide.....	1
21	238-5021	O-RING - 15/16 ID x 1/16 inch wide.....	1
22	1978265C1	RING - backup, small O-ring .. . . . .	1
	1986635C1	KIT - seal, contains items 4, 8, 10, 11, 12, 14, 15, 20, 21 and 22.....	1

## REAR OUTRIGGER HYDRAULICS

### USED ON MODELS WITH TWO SPOOL CONTROL VALVE

REF.	PART NO.	DESCRIPTION	REQD.
1	1978103C1	VALVE ASSEMBLY - control, two spool, parts list page 8-49 .....	1
2	218-5117	ELBOW - 90 degree adj, 7/8-14 flare x 3/4-16 inch O-ring .....	2
3	237-6008	O-RING - 41/64 ID x 3/32 inch wide .....	1
4	S243267	HOSE - 1066 mm long, to cylinders .....	4
5	218-5377	ELBOW - 90 deg sw, 7/8-14 fl x 1-1/16-12 inch fem flare sw .....	4
6	G105017	CYLINDER ASSEMBLY - outrigger, parts list page 8-97 .....	2
7	S243527	ADAPTER - straight, special .....	2
8	237-6008	O-RING - 41/64 ID x 3/32 inch wide .....	1
9	218-5232	ELBOW - 90 deg swivel, 7/8-14 inch flare x fem flare swivel .....	2
10	218-5031	ADAPTER - straight, 3/4-16 inch flare x O-ring boss .....	1
11	237-6008	O-RING - 41/64 ID x 3/32 inch wide .....	1
12	218-5351	ADAPTER - straight, 3/4-16 flare x 9/16-18 inch O-ring boss .....	1
13	237-6006	O-RING - 15/32 ID x 5/64 inch wide .....	1
14	218-5378	ELBOW - 90 deg sw, 7/8-14 flare x 3/4-16 inch fem flare sw .....	3
15	S243634	HOSE - 56 inch, at control valve to manifold block .....	1
16	S243742	HOSE - 60 inch, at control valve to lower hydraulic swivel .....	1
17	218-5059	ADAPTER - straight, 3/4-16 inch flare x O-ring boss .....	1
18	237-6008	O-RING - 41/64 ID x 3/32 inch wide .....	1
19	R14668	CLAMP - hose .....	2
20	495-11053	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch .....	1
21	131-217	NUT - hex, self-locking, 3/8 inch NC, grade 8 .....	1
22	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch .....	4
23	496-21041	WASHER - flat, 13/32 x 13/16 x 3/32 inch, hardened .....	8
24	131-217	NUT - hex, self-locking, 3/8 inch NC, grade 8 .....	4

1085C Cruz-Air Excavator  
**SWING MOTOR HYDRAULIC CIRCUIT**

REF	PART NO	DESCRIPTION	REQ'D.
1	1978152C1	VALVE ASSEMBLY - control, arm and swing, parts list page 8-17	1
2	218-5110	ELBOW - 90 degree, 1-5/16-12 inch flare x adj O-ring boss	1
3	237-6016	O-RING - 1-11/64 ID x 7/64 inch	1
4	218-5034	ADAPTER - straight, 1-5/16-12 inch flare x O-ring boss	1
5	237-6016	O-RING - 1-11/64 ID x 7/64 inch	1
6	218-5234	ELBOW - 90 degree, 1-5/16-12 inch flare x swivel flare	1
7	S401536	HOSE - 30 inch, at control valve to relief valve	2
8	218-5140	ELBOW - 45 degree, 1-5/16-12 inch flare x adj O-ring boss	2
9	237-6016	O-RING - 1-11/64 ID x 7/64 inch	1
10	S236820	VALVE ASSEMBLY - relief, swing crossover, parts list page 8-55	1
11	413-560	BOLT - hex, 5/16 NC x 3-3/4 inch	2
12	495-11034	WASHER - flat, 11/32 x 11/16 x 1/16 inch	4
13	131-69	NUT - hex, self-locking, 5/16 inch NC	2
14	218-5110	ELBOW - 90 degree, 1-5/16-12 inch flare x adj O-ring boss	2
15	237-6016	O-RING - 1-11/64 ID x 7/64 inch	1
16	S243651	HOSE - 28 inch long, at relief valve to swing motor	1
17	S243269	HOSE - 36 inch long, at relief valve to swing motor	1
18	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch, grade 5	8
19	A12306	CLAMP - split flange	4
20	238-6219	O-RING - 1-5/16 ID x 1-9/16 inch	2
21	S517756	MOTOR ASSEMBLY - swing, parts list page 8-57	1
22	413-822	BOLT - hex, 1/2 NC x 1-3/8 inch	2
23	492-11050	WASHER - lock, 1/2 inch	2
24	218-5057	ADAPTER - straight, 9/16-18 inch flare x O-ring boss	1
25	237-6016	O-RING - 1-11/64 ID x 7/64 inch	1
26	S241218	HOSE - 914 mm long, drain	1
27	218-792	ADAPTER - reducing, 1/2 tube OD x 9/16-18 inch flare	1
28	218-344	NUT - hex, 3/4 inch NF	1
29	218-845	TEE - 3/4-16 inch flare branch x flare x adj straight thread	1
30	L18337	STRAP - nylon, drain hose	1

UPPER AND LOWER HYDRAULIC SWIVEL MOUNTING

REF	PART NO.	DESCRIPTION	REQ'D
1	S517241	SWIVEL ASSEMBLY - upper hydraulic, parts list page 8-59 . . . . .	1
2	413-628	BOLT - hex, 3/8 NC x 1-3/4 inch . . . . .	3
3	492-11038	WASHER - lock, 3/8 inch . . . . .	3
4	238-5250	O-RING - 5 x 5-1/4 x 9/64 inch wide . . . . .	1
5	S619177	SWIVEL ASSEMBLY - lower hydraulic, parts list page 8-61 . . . . .	1
6	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch, grade 5 . . . . .	3
7	492-11038	WASHER - lock, 3/8 inch . . . . .	3
8	S243360	BRACKET - stop, upper and lower swivels . . . . .	1
9	413-620	BOLT - hex, 3/8 NC x 1-1/4 inch, grade 5 . . . . .	2
10	492-11038	WASHER - lock, 3/8 inch . . . . .	2
11	326-828	BOLT - hex, 1/2 NC x 1-3/4 inch, grade 8 . . . . .	3
12	492-11050	WASHER - lock, 1/2 inch . . . . .	3
13	496-21053	WASHER - flat, 17/32 x 1-1/16 x 1/8 inch, hardened . . . . .	3
14	S242813	BRACKET - stop, lower swivel . . . . .	1
15	326-820	BOLT - hex, 1/2 NC x 1-1/4 inch, grade 8 . . . . .	4
16	196-15	WASHER - flat, 17/32 x 1-1/16 x 1/8 inch, hardened . . . . .	4
17	221-843	PLUG - hex socket, 3/8 inch PT . . . . .	2
18	218-5153	PLUG - hex, 7/16-20 inch O-ring boss . . . . .	1
19	237-6004	O-RING - 23/64 ID x 5/64 inch wide . . . . .	1
20	S77467	HOSE - 38 inch long, from port 4 of upper swivel . . . . .	1
21	218-772	PLUG - hex, 7/16-20 inch flare, hose from port 4 of swivel if used . . . . .	1

For electrical swivel and related parts see page 4-35.

1085C Cruz-Air Excavator  
4-in-1 BUCKET HYDRAULICS

8-73

REF	PART NO	DESCRIPTION	REQ'D
1	S120966	HOSE - 104 inch long, to intermediate tubes .....	2
2	S207722	TUBE - intermediate, to hoses at cylinder.....	2
3	S11226	HOSE - 20 inch long, to bucket cylinders.....	4
4	S31431	CYLINDER ASSEMBLY - 4-in-1 bucket, parts list page 8-99 .....	2
5	218-5173	ELBOW - 45 deg, 3/4-16 inch flare x swivel straight thread, used on models with extendahoe dipper only .....	1

**NOTE:** For completion of this circuit to the control valve  
see pages 8-75 or 8-81.

1085C Cruz-Air Excavator  
**TOOL CYLINDER HYDRAULIC CIRCUIT**  
**MODELS WITH RIGID ARM**

REF.	PART NO.	DESCRIPTION	REQ'D
1	1978153C1	VALVE ASSEMBLY - control, boom and tool, parts list page 8-19. . . .	1
2	218-5069	ADAPTER - straight, 1-5/16-12 inch flare x O-ring boss.....	2
3	237-6016	O-RING - 1-11/64 ID x 7/64 inch .....	1
4	S243683	HOSE - 980 mm long, at control valve .....	2
5	S224607	TUBE - from hose at control valve to closed end of tool cylinder .....	1
6	S243517	TUBE - from hose at control valve to rod end of tool cylinder....	1
7	S235936	HOSE - 49 inch long, intermediate.....	4
8	S517483	TUBE - intermediate.....	2
9	S517803	TUBE - to hose at closed end of tool cylinder.....	1
10	S517802	TUBE - to hose at rod end of tool cylinder .....	1
11	S8628	HOSE - 36 inch long, at tool cylinder.....	2
12	218-5069	ADAPTER - straight, 1-5/16-12 inch flare x O-ring boss.....	2
13	237-6016	O-RING - 1-11/64 ID x 7/64 inch .....	1
14	1978243C2	CYLINDER ASSEMBLY - tool, parts list page 8-91 .....	1
15	413-816	BOLT - hex, 1/2 NC x 1 inch .....	8
16	495-11053	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch .....	8
17	492-11050	WASHER - lock, 1/2 inch.....	8
18	S120173	CLAMP - tubes to boom and arm.....	8
19	413-832	BOLT - hex, 1/2 NC x 2 inch .....	10
20	492-11050	WASHER - lock, 1/2 inch.....	10
21	495-11053	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch .....	2
22	S243610	CLAMP - hoses to boom and arm .....	4
23	S79656	CLAMP - tubes to arm.....	2

1085C Cruz-Air Excavator  
**WRIST-O-TWIST CYLINDER**

REF	PART NO.	DESCRIPTION	REQD
	S619488	CYLINDER ASSEMBLY - Wrist-O-Twist, 102 ID x 191 mm stroke, Wrist-O-Twist .....	1
1	S517638	TUBE - cylinder .....	1
2	131-490	NUT - hex, self-locking, 1-1/4 inch NF .....	1
3	S516773	PISTON - cylinder .....	1
4	S120057	RING - wear, piston.....	2
5	S120045	SEAL - piston.....	1
6	238-5218	O-RING - 1-1/4 ID x 1/8 inch wide.....	1
7	S120058	BUSHING - gland .....	1
8	G107997	SEAL - piston rod, narrow.....	1
9	G107923	SEAL - U-cup .....	1
10	S40025	WIPER - piston rod, outer .....	1
11	238-5239	O-RING - 3-5/8 ID x 1/8 inch wide.....	1
12	A41165	RING - backup, gland O-ring. . . . .	1
13	S516774	GLAND - cylinder .....	1
14	S243459	ROD ASSEMBLY - piston, 51 mm diameter. ....	1
15	S243462	BUSHING - piston rod .....	1
16	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch. ....	2

HYDRAULIC HAND CONTROL CIRCUIT

RIGHT-HAND HAND CONTROL VALVE TO BOOM AND TOOL CONTROL VALVE

REF	PART NO.	DESCRIPTION	REQ'D.
1	S517338	VALVE ASSEMBLY - hand control, right-hand, parts list page 8-113.....	1
2	163-39	SCREW - machine, hex washer head, No 10 NC x 3/4 inch. . . . .	4
3	218-5155	PLUG - hex, 9/16-18 inch O-ring boss.....	2
4	237-6006	O-RING - 15/32 ID x 5/64 inch wide.....	1
5	33261	GASKET - copper, inverted flare fitting.....	4
6	A18531	FITTING - special, inverted flare.....	2
7	S243382	BOLT - special, fitting.....	2
8	S243484	HOSE - 1150 mm long, from side ports on hand control valve to crosses under the cab floor plate.....	2
9	201-111	ADAPTER - straight, 9/16-18 inch face seal x O-ring boss. . . . .	4
10	237-6006	O-RING - 15/32 ID x 5/64 inch wide, O-ring boss end.....	1
11	238-6011	O-RING - 19/64 ID x 5/64 inch wide, face seal end.....	1
12	S243448	HOSE - 1100 mm long, from ports on bottom of hand control valve to hoses to inlet and outlet sections of boom and tool control valve.....	4
13	S243440	HOSE - 2300 mm long, from hand control valve hoses to outlet section of boom and tool control valve. . . . .	2
13A	238-6011	O-RING - 5/16 ID x 1/16 inch wide.....	1
14	495-11066	WASHER - flat, 21/32 x 1-5/16 x 3/32 inch.....	1
15	D34033	CLAMP - hose.....	1
16	131-217	NUT - hex, self-locking, 3/8 inch NC, grade 8.....	1
17	201-111	ADAPTER - straight, 9/16-18 inch face seal x O-ring boss.....	4
18	237-6006	O-RING - 15/32 ID x 5/64 inch wide, O-ring boss end... . . . .	1
19	238-6011	O-RING - 19/64 ID x 5/64 inch, face seal end.....	1
20	S243451	HOSE - 1650 mm long, from hand control valve hoses to inlet section of boom and tool control valve.....	2
20A	238-6011	O-RING - 5/16 ID x 1/16 inch wide.....	1
21	1978153C1	VALVE ASSEMBLY - control, boom and tool, parts list page 8-19.....	1
22	L18337	STRAP - tie, hoses connected to hand control valve.....	UAR

1085C Cruz-Air Excavator  
**HAND CONTROL VALVE ASSEMBLIES**

8-113

REF.	PART NO.	DESCRIPTION	REQ'D.
	S517338	VALVE ASSEMBLY - hand control, right-hand .....	1
	S517923	VALVE ASSEMBLY - hand control, left-hand, not shown.....	1
	S301289	VALVE ASSEMBLY - control.....	1
1	NSS	HOUSING - valve.....	1
	S301294	SPOOL ASSEMBLY - valve .....	4
2	NSS	RING - retaining ..	3
3	NSS	RETAINER - spring .....	1
4	NSS	SPRING - spool, inner.....	1
5	NSS	SHIM - 7/16 OD x 15/64 ID x .01 inch thick....	UAR
6	NSS	SHIM - 7/16 OD x 15/64 ID x .02 inch thick.....	UAR
7	NSS	SHIM - 7/16 OD x 15/64 ID x .06 inch thick. ..	UAR
8	NSS	SPOOL - valve.....	1
	S301295	PLUNGER ASSEMBLY - valve.....	4
9	1978194C1	PLUNGER - valve.....	1
10	S301304	RING - snap, plunger.....	1
11	S301305	GUIDE - valve ..	1
12	N14759	SEAL - plunger.....	1
13	238-5021	O-RING - 15/16 ID x 1/16 inch wide .....	1
14	S301302	SPRING - spool, outer.....	4
15	1978192C1	SLEEVE - spool .....	4
16	S301296	PLATE - mounting, lower. . . . .	1
17	S301303	PLATE - mounting, upper.....	1
18	S301301	BALL - lever pivot . . . . .	1
19	S301300	PIN - pivot ball.....	1
20	S301298	SLEEVE - pivot ball.....	1
21	S301297	PLATE - control valve .....	1
22	S301299	ADAPTER - lever .....	1
23	S301290	COLLAR - boot. ....	1
24	S301291	BOOT - dust.....	1
	S301292	LEVER ASSEMBLY - valve, hand control.....	1
25	NSS	LEVER - valve, hand control, includes nut.....	1
26	S301310	GRIP - lever.....	1
27	61-32548	BOLT - hex socket, 1/4 NC x 3 inch.....	4

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1085C Cruz-Air Excavator  
**SWING GEARBOX**

REF.	PART NO.	DESCRIPTION	REQ'D.
	S955795	GEARBOX ASSEMBLY - swing, continued .....	1
29	S618557	SHAFT - output, with pinion gear.....	1
30	26-1052	BOLT - hex, 5/8 NC x 3-1/4 inch, grade 8 .....	6
31	S64319	PIN - dowel, gearbox housing to cover.....	2
32	*S613678	HOUSING - gearbox, swing.....	1
33	26-1432	BOLT - hex, 7/8 NC x 2 inch, grade 8 .....	1
34	26-1492	BOLT - hex, 7/8 NC x 5-3/4 inch, grade 8.....	2
35	S92341	WASHER - flat, 7/8 inch, hardened .....	3
36	221-849	PLUG - hex socket, 1/8 inch PT, if used.....	2
	*B17423	LOCTITE - 271 Red, 50 ml bottle, parts shown with asterisk must use Loctite in place of gaskets .....	1

**1085C Cruz-Air Excavator  
MAIN FRAME**

9-21

REF.	PART NO.	DESCRIPTION	REQD.
1	S957120	FRAME - main, with rear outriggers .....	1
2	S957121	FRAME - main, with front and rear outriggers, not shown .....	2
3	S517705	COVER - transmission .....	1
4	S619507	COVER - torque converter .....	1
5	S95569	WASHER - special, hardened, 1/2 inch.....	6
6	131-70	NUT - hex, self-locking, 1/2 inch NC.....	6
7	S243548	PLATE - access, outrigger valve.....	1
8	496-21053	WASHER - flat, 17/32 x 1-1/16 x 1/8 inch, hardened... ..	4
9	131-70	NUT - hex, self-locking, 1/2 inch NC.....	4
10	S957042	BRACKET - mounting, front axle to frame.....	1
11	S243214	BUSHING - bracket, pivot pin, with grease hole .....	1
12	S243700	BUSHING - bracket, pivot pin, without grease hole. ....	1
13	219-55	FITTING - grease, 90 degree, 1/8 PT x 27/32 inch long.....	1
14	S517840	PIN - pivot, bracket to frame .....	1
15	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch long .....	1
16	495-81249	WASHER - flat, 2-1/8 x 4-1/2 x 3/16 inch .....	1
17	495-81248	WASHER - flat, 1-7/8 x 4 x 3/16 inch .....	1
18	25-1228	NUT - hex, slotted, 1-3/4 inch NC .....	1
19	432-2452	PIN - cotter, 3/8 x 3-1/4 inch .....	1
20	S243732	SPACER - bushing.....	1

Continued on next page

1085C Cruz-Air Excavator  
**BOOM SUPPORT AND TOOL BOX**

9-31

REF.	PART NO.	DESCRIPTION	REQD.
1	S957075	SUPPORT - boom rest.....	1
2	413-1240	BOLT - hex, 3/4 NC x 2-1/2 inch .....	4
3	S94643	WASHER - flat, special .....	4
4	S619442	GRILLE - radiator, at support .....	1
5	413-612	BOLT - hex, 3/8 NC x 3/4 inch .....	4
6	492-11038	WASHER - lock, 3/8 inch .....	4
7	495-21044	WASHER - flat, 7/16 x 1 x 5/64 inch .....	4
8	S219842	BOX - tool, operator's .....	1
9	131-52	NUT - hex, self-locking, 3/8 inch NC.....	4
10	495-11041	WASHER - flat, 13/32 x 13/16 x 1/16 inch .....	4

**1085C Cruz-Air Excavator  
LEFT-HAND TILT CONSOLE**

**9-41**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	S619426	COVER - console, center.....	1
2	S619532	COVER - console, outer.....	1
3	S619533	COVER - console, inner.....	1
4	175-474	SCREW - machine, truss head slotted, No. 10 NC x 1/2 inch.....	13
5	S117167	NUT - U-type, No. 10 NC.....	7
6	S517760	CONSOLE - tilt.....	1
7	413-616	BOLT - hex, 3/8 NC x 1 inch.....	1
8	425-106	NUT - hex, 3/8 inch NC.....	1
9	S619535	COVER - tilt console, outer.....	1
10	S619534	COVER - tilt console, inner.....	1
11	S619536	COVER - tilt console, top.....	1
12	121-227	SCREW - shoulder, hex socket, 3/8 NC x 1/2 inch long shoulder.....	2

1085C Cruz-Air Excavator  
SUSPENSION SEAT

9-51

REF.	PART NO.	DESCRIPTION	REQD.
	S517337	SEAT ASSEMBLY - suspension, parts list pages 9-49 through 9-53..	1
1	*N6858	CAP AND DECAL - height adjustment lever.....	1
2	*S301396	LEVER - height adjustment .....	1
3	*A47381	LATCH - lever .....	1
4	*138-2057	PIN - roll, 5/32 x 5/8 inch .....	1
5	*A47382	SPRING - latch .....	1
6	*A47384	SPRING - housing .....	2
7	*A47761	HOUSING - upper .....	1
8	*A47763	KNOB ASSEMBLY - includes handle and decals, which are not serviced separately .....	1
9	*135-45	PIN - groove, 5/32 x 1 inch, full length, tapered .....	1
10	*A45513	GEAR AND SHAFT - adjustment, weight.....	1
11	*111-107	BOLT - carriage, 1/4 NC x 1/2 inch .....	2
12	*A45531	BRACKET - shaft .....	1
13	*131-71	NUT - hex, self-locking, 1/4 inch NC .....	2
14	*D82834	WASHER - thrust .....	1
15	*A45505	GEAR AND SHAFT - suspension plate .....	1
16	*A45504	BRACKET - spring.....	1
17	*A45517	BLOCK - slider, 2-9/16 inch wide .....	1
18	*A45515	BLOCK - slider, 1-9/16 inch wide .....	1
19	*A45516	BLOCK - slider, 2-3/16 inch wide .....	1
20	*A45512	BLOCK - slider, 1-3/16 inch wide .....	1
21	*S301393	INDICATOR - ride height.....	1
22	*A47760	TUBE - bearing.....	4
23	*A47759	ARM - suspension.....	1
24	*A45501	BUSHING - shock absorber.....	1
25	*A47762	SHAFT - bearing.....	1
26	*131-1182	NUT - hex, self-locking, 1/2 inch NC .....	1
27	*A45054	BUMPER - seat .....	2
28	*135-46	PIN - groove, 5/32 x 1-1/4 inch, full length, tapered . . .	1
29	*138-77	PIN - roll, 5/32 x 1 inch .....	1
	*S301392	KIT - seat suspension support, includes all items shown above with an asterisk and those on pages 9-49 and 9-53.....	1

**BOOM LUBRICATION LINES**  
**MODELS WITH EXCAVATING BOOM AND ARM**

REF.	PART NO.	DESCRIPTION	REQD.
1	S957010	BOOM ASSEMBLY - excavating arm, see page 9-55 or 9-57 for boom and bushings.....	1
2	217-1014	ELBOW - street, 90 degree, 1/8 inch PT .....	1
3	L72667	HOSE - 60 inch long, lubrication, boom pin at turntable.....	1
4	F53473	NUT - special, lubrication hose .....	2
5	L11541	STRAP - tie, hose.....	UAR
6	S957011	CYLINDER ASSEMBLY - boom, parts list page 8-89 .....	1
7	219-55	FITTING - grease, 90 degree, 1/8 PT x 27/32 inch long.....	1
8	218-531	ELBOW - 45 degree, 7/16-20 flare x 1/8 inch PT .....	1
9	S77467	HOSE - lubrication, pin at rod end of boom cylinder .....	1
10	49885	CLAMP - 5/8 inch ID, lubrication hose .....	1
11	495-11053	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch.....	1
12	131-218	NUT - hex, self-locking, 3/8 inch NC .....	1
13	219-36	FITTING - grease, 45 degree, 1/8 PT x 55/64 inch long. ....	2
14	218-441	ADAPTER - straight, 7/16-20 flare x 1/8 inch PT .....	2
15	S243569	TUBE - lubrication, rod end of boom cylinder .....	1
16	S517716	TUBE - lubrication, base end of arm cylinder.....	1
17	218-732	CONNECTOR - straight, 7/16-20 inch flare. ....	1
18	49851	CLAMP - 1/4 inch ID, lubrication tubes to boom.....	3
19	495-11053	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch .....	3
20	131-218	NUT - hex, self-locking, 3/8 inch NC... ..	3
21	S77467	HOSE - lubrication, pin at base end of arm cylinder.....	1
22	218-481	ELBOW - 90 degree, 7/16-20 flare x 1/8 inch PT .....	1
23	L111706	HOSE - 44 inch long, lubrication, rod end of arm cylinder ..	1
24	S957012	CYLINDER ASSEMBLY - arm, parts list page 8-85 .....	1

**STANDARD CAB**

**WINDOWS, SEALS, AND INSULATION**

REF.	PART NO.	DESCRIPTION	REQD.
	S619460	CAB ASSEMBLY - standard, parts list pages 9-71 through 9-79.....	1
1	*N13095	LEXAN - window, in door, part of S301144 door assembly, see page 9-71 .....	1
2	*S517949	LEXAN - window, right-hand .....	1
3	*S301146	LEXAN - window, rear .....	1
4	REF	SEAL - used with cab door window, 160 inch (4064 mm) long, cut from S118468, see below, part of S301144 door assembly, page 9-73 .....	1
5	REF	SEAL - used with right-hand cab window, 136-1/4 inch (3460 mm) long, cut from S118468, see below.....	1
6	REF	SEAL - used with rear window, 102-13/16 inch (2611 mm) long, cut from S118468, see below.....	1
7	S241506	INSULATION - cab, top, requires cutting out for top window.....	1
8	S301152	INSULATION - cab, rear.....	1
9	N13077	INSULATION - cab, right-hand, rear.....	1
10	S301153	INSULATION - cab, right-hand, front.....	1
11	N13080	INSULATION - cab, left-hand, rear .....	1
12	*S301158	LEXAN - window, cab top.....	1
	S118468	SEAL - window glass, bulk, 600 inch (15240 mm) long ....	UAR

**\*NOTE:** Replacement of reference numbers 1, 2, 3 and 12 may be obtained from local source. Material to be 1/4 inch (6 mm) thick Lexan bronze tint with crowned edges.

**1085C Cruz-Air Excavator**  
**MATERIAL HANDLING CAB**  
**CAB AND WINDOW GUARDS**

REF	PART NO.	DESCRIPTION	REQD.
	S956959	CAB ASSEMBLY - material handling, also includes parts on page 9-83 .....	1
1	NSS	CAB - material handling .....	1
2	S508190	FRAME - cab rear window .....	1
3	S221281	HANDLE - retaining, rear window and door .....	3
4	195-533	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch .....	3
5	S63621	BUMPER - rubber, door to cab .....	2
6	173-116	SCREW - machine, round head slotted, No 12 NC x 1/2 inch .....	2
7	S94142	LATCH - door retaining, open .....	1
8	205-15	PLUG - button, 3/8 inch hole, cab rear .....	6
9	205-61	PLUG - button, 1-1/2 inch hole, cab rear .....	1
10	205-72	PLUG - button, 3 inch hole, cab rear .....	1
11	S117638	PLUG - cab rear and right side, 3-3/4 inch hole .....	2
12	S618301	GUARD - windshield .....	1
13	113-925	BOLT - hex, 1 NC x 3 inch .....	4
14	195-553	WASHER - flat, 1 inch .....	4
15	131-20	NUT - hex, self-locking, 1 inch NC .....	4
16	113-2	BOLT - hex, 1/4 NC x 5/8 inch, mirror to cab .....	2
17	492-11025	WASHER - lock, 1/4 inch, mirror to cab .....	2
18	S515469	MIRROR - cab, rear view .....	1
19	S515179	GUARD - side window .....	1
20	S221288	GUARD - rear window .....	1
21	413-820	BOLT - hex, 1/2 NC x 1-1/4 inch .....	8
22	492-11050	WASHER - lock, 1/2 inch .....	8
23	195-533	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch, used as spacer .....	UAR
24	*REF	SEAL - rear window frame to cab, 98 inch (2489 mm) long, cut from S120316 .....	1
25	196-15	WASHER - flat, 17/32 x 1-1/16 x 1/8 inch, hardened, cab mounting, see reference number 19, page 9-47 for mounting plate .....	10
26	131-208	NUT - hex, self-locking, 1/2 inch NC, cab mounting, see reference number 19, page 9-47 for mounting plate .....	10
	*S120316	SEAL - weather, bulk roll, 300 inch (7620 mm) long .....	UAR

**DECALS**

**EXTERIOR, REFLECTORS, AND NON-SKID PADS**

REF	PART NO.	DESCRIPTION	REQ'D.
1	S619623	DECAL - Case, left-hand side, Excavator boom.....	1
2	S619621	DECAL - Case, right-hand side, Excavator boom .....	1
3	S619628	DECAL - 1085C Cruz-Air, both sides of engine shroud .....	2
4	S619626	DECAL - Case, with treads, rear of shroud.....	1
5	S617990	DECAL - Case, with treads, boom sides, models with material handling boom .....	2
6	S619638	DECAL - Extendahoe, both sides of extendahoe.....	2
7	S619624	DECAL - treads, left-hand side, Excavator boom .....	1
8	S619622	DECAL - treads, right-hand side, Excavator boom.....	1
9	S619630	DECAL - treads, left-hand side of shroud... ..	1
10	S619625	DECAL - treads, front of shroud.....	1
11	S619629	DECAL - treads, right-hand side of shroud.....	1
12	S619627	DECAL - grille patch .....	1
13	S121072	REFLECTOR - red, rear and both sides of rear shroud .. ..	4
14	S121073	REFLECTOR - yellow, front and both sides of engine shroud .....	4
15	S243101	PAD - non-skid, 4 x 11 inch.....	29
16	D55216	PAD - non-skid, 2 x 9 inch.....	4
17	L71193	PAD - non-skid, 3-1/2 x 8-51/64 inch.....	2

## DECALS FRENCH

REF	PART NO.	DESCRIPTION	REQD.
1	S619649	DECAL - control pattern D, standard . . . . .	1
2	321-6516	DECAL - Warning, transmission cover removal . . . . .	3
3	S243780	DECAL - Important, boom cylinder swing clearance. . . . .	1
4	321-4020	DECAL - Attention, before starting engine . . . . .	1
5	321-4324	DECAL - Attention, engine fan . . . . .	2
6	S243778	DECAL - hydraulic oil . . . . .	1
7	321-6719	DECAL - Warning, batteries contain acid and explosive gas . . . . .	1
8	321-5183	DECAL - battery . . . . .	1
9	321-6146	DECAL - diesel fuel . . . . .	1
10	321-6702	DECAL - Warning, attachment to cab clearance . . . . .	1
11	321-6701	DECAL - Warning, cooling system service . . . . .	2
12	321-5394	DECAL - battery master disconnect, not shown . . . . .	1
13	S243777	DECAL - throttle and brake lock . . . . .	1
14	S243779	DECAL - fuses . . . . .	1
15	S517970	DECAL - Warning, a sudden stop will occur. . . . .	1
16	S517978	DECAL - Warning, the brake circuit on this machine is charged. . . . .	1
17	S511692	BOX - operators manual . . . . .	1
18	A141917	CORD - manual to box . . . . .	1
19	151-522	RIVET - pop, 3/16 x 17/32 inch, manual box to cab . . . . .	3
20	321-6720	DECAL - Warning, wrong jumper cable connections to starter terminals . . . . .	1

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131-217	8-101	16	131-70	9-25	6	140-110	4-15	22
131-217	8-103	16	131-70	9-33	29	140-110	5-5	2
131-217	9-33	20	131-70	9-35	5	141-13	3-7	21
131-217	9-35	23	131-70	9-35	8	141-4	6-61	1
131-218	8-117	10	131-70	9-35	17	141-54	3-5	10
131-218	9-61	12	131-70	9-35	34	141-54	9-3	14
131-218	9-61	20	131-70	9-35	36	141-6	7-9	11
131-418	4-41	5	131-70	9-39	5	141-62	3-9	3
131-425	9-49	15	131-70	9-47	10	141-62	6-61	3
131-460	2-17	6	131-70	9-47	15	145582C91	5-19	
131-460	2-17	15	131-70	9-55	13	145587C1	5-19	1
131-487	6-19	5	131-70	9-55	28	151-522	9-95	23
131-487	6-19	31	131-70	9-55	31	151-522	9-101	19
131-490	8-93	2	131-70	9-57	13	151-543	4-53	32
131-498	3-7	17	131-70	9-57	32	151-705	9-53	11
131-498	3-9	11	131-70	9-57	35	163-13	8-115	27
131-499	9-3	8	131-70	9-63	10	163-17	4-43	18
131-5	4-43	4	131-70	9-65	6	163-24	4-21	10
131-502	4-51	4	131-70	9-65	10	163-32	9-77	28
131-51	9-47	18	131-70	9-65	24	163-39	3-9	23
131-52	3-3	4	131-71	2-7	5	163-39	4-25	9
131-52	4-11	15	131-71	3-9	16	163-39	8-101	2
131-52	4-21	15	131-71	3-15	5	163-39	8-103	2
131-52	4-45	20	131-71	6-29	5	163-39	9-43	16
131-52	6-11	44	131-71	7-15	3	165-23	4-41	15
131-52	7-9	16	131-71	9-35	12	166-43	5-3	25
131-52	8-3	18	131-71	9-43	19	166-534	5-15	1
131-52	9-5	3	131-71	9-51	13	168-25	5-3	7
131-52	9-19	14	131-820	8-99	10	169-44	4-51	3
131-52	9-31	9	131-85	3-7	15	171-228	9-49	3
131-552	6-59	20	131-937	4-31	3	173-116	9-81	6
131-67	4-51	12	131-937	4-31	9	175-474	5-5	3
131-67	9-75	13	132-118	2-45	17	175-474	5-5	11
131-67	9-75	35	132-161	9-63	21	175-474	5-5	15
131-676	7-9	9	132-161	9-63	27	175-474	5-5	17
131-69	2-3	20	132-208	9-55	17	175-474	9-41	4
131-69	2-5	40	132-208	9-57	17	175-474	9-43	13
131-69	3-5	8	132-24	9-7	31	178-53	9-55	3
131-69	3-5	17	132-50	3-5	4	178-53	9-55	21
131-69	3-5	22	132-71	9-63	15	178-53	9-57	3
131-69	3-9	30	132787H1	6-33	14	178-53	9-57	20
131-69	4-17	13	1329896C1	4-23	8	178-53	9-57	24
131-69	4-29	7	1341919C1	7-19	8	178-53	9-63	4
131-69	4-45	1	1341920C1	7-19	1	178-819	4-47	2
131-69	5-17	12	1346135C1	5-29	4	178-850	4-43	6
131-69	8-53	13	135-45	9-51	9	179-153	9-73	18



**WINDSHIELD WIPER**

**USED WITH MATERIAL HANDLING CAB**

REF.	PART NO.	DESCRIPTION	REQ'D.
	S516919	MOTOR ASSEMBLY - wiper, 24 volt .....	1
	F93654	MOTOR ASSEMBLY - windshield wiper .....	1
1	NSS	MOTOR - windshield wiper.....	1
2	D71411	SPRING - Belleville, motor mounting .....	1
3	F44452	NUT - special locking .....	1
4	N13124	GEAR - drive, plastic, with shaft.....	1
5	D72850	BRACKET - motor .....	1
6	D72849	SCREW - with lock washer, bracket to motor .....	3
7	F44456	SCREW - bracket to arm.....	2
8	D71427	LINK - wiper.....	1
9	A22431	WASHER - spacer .....	2
10	D71414	CLIP - spring .....	2
11	A36091	ARM - wiper drive .....	1
12	D72848	SHAFT - wiper arm .....	1
13	414-412	BOLT - hex, 1/4 NF x 3/4 inch.....	2
14	492-11025	WASHER - lock, 1/4 inch.....	2
15	L35260	ARM - wiper .....	1
16	S225154	ADAPTER - wiper arm and shaft to windshield.....	1
17	F43938	BLADE - wiper.....	1
18	S242676	HARNES - cab harness to windshield wiper.....	1
19	A62209	CLAMP - wiring harness .....	7
20	276-2056	SCREW - hex, self tapping, No. 10 NC x 3/8 inch, not shown.....	7

UPPER BRAKE SYSTEM

BRAKE VALVE TO PILOT MANIFOLD VALVE AND SWIVEL

REF.	PART NO.	DESCRIPTION	REQ'D.
1	1978110C1	VALVE ASSEMBLY - brake, parts list page 7-13 .....	1
2	413-420	BOLT - hex, 1/4 NC x 1-1/4 inch .....	3
3	131-71	NUT - hex self-locking, 1/4 inch NC .....	3
4	201-111	ADAPTER - straight, 9/16-18 inch face seal x O-ring boss .....	2
5	237-6006	O-RING - 15/32 ID x 5/64 inch wide, boss end .....	1
6	238-6011	O-RING - 19/64 ID x 5/64 inch, face seal end .....	1
7	S243726	HOSE - 4110 mm long, brake valve to manifold at accumulator .....	1
8	201-325	ELBOW - 90 degree adj, 9/16-18 face x 3/4-16 inch O-ring .....	3
9	238-6011	O-RING - 19/64 ID x 5/64 inch, face seal end .....	1
10	237-6008	O-RING - 41/64 ID x 3/32 inch wide, boss end .....	1
11	S517675	MANIFOLD - brake, to accumulator and pilot manifold valve .....	1
12	217-1062	TEE - 1/4 inch PT female branch x female x male PT .....	1
	S243718	COUPLING ASSEMBLY - quick disconnect .....	1
13	NSS	COUPLING - quick disconnect .....	1
14	S301201	CAP - dust, Aero Quip is stamped on coupling, if used .....	1
14	H434163	CAP - dust, PD343 is stamped on coupling, if used .....	1
15	S118719	CONNECTOR - straight, 3/4-16 O-ring boss .....	2
16	237-6008	O-RING - 41/64 ID x 3/32 inch wide .....	2
17	1978111C1	ACCUMULATOR ASSEMBLY - brake, parts list page 7-19 .....	1
18	492-11050	WASHER - lock, 1/2 inch .....	3
19	414-814	BOLT - hex, 1/2 NF x 7/8 inch .....	3
20	S243435	HOSE - 1950 mm long, manifold to pilot manifold valve .....	1
21	201-106	ADAPTER - straight, 11/16-16 face seal x 3/4-16 inch O-ring .....	2
22	238-6012	O-RING - 23/64 ID x 5/64 inch, face seal end .....	1
23	237-6008	O-RING - 41/64 ID x 3/32 inch wide, boss end .....	1
23A	S243815	FILTER - 25 micron, to port "A" of pilot manifold valve .....	1
24	REF	VALVE ASSEMBLY - pilot manifold, see page 8-41 for correct valve ....	1
25	S243655	HOSE - 1600 mm long, pilot manifold valve to upper swivel .....	1
26	201-331	ELBOW - 45 deg, adj, 9/16-18 face seal x 7/16-20 O-ring boss, at upper swivel port No. 5 .....	1
27	238-6011	O-RING - 19/64 ID x 5/64 inch, face seal end .....	1
28	237-6004	O-RING - 11/32 ID x 5/64 inch, boss end .....	1
29	S243659	HOSE - 1050 mm long, see page 5-11, item 22 tee for continuation of system .....	1
30	201-119	ADAPTER - straight, 9/16-18 face seal x 3/4-16 inch O-ring .....	1
31	238-6011	O-RING - 19/64 ID x 5/64 inch, face seal end .....	1
32	237-6008	O-RING - 41/64 ID x 3/32 inch wide, boss end .....	1
33	S243727	HOSE - 2700 mm long, pilot manifold valve to brake valve .....	1
34	201-329	ELBOW - 90 degree, 9/16-18 inch swivel x O-ring face seal .....	1
35	238-6011	O-RING - 19/64 ID x 5/64 inch, face seal end .....	1
36	201-101	ADAPTER - straight, 11/16-16 face seal x 9/16-18 inch O-ring .....	1
37	238-6012	O-RING - 23/64 ID x 5/64 inch, face seal end .....	1
38	237-6006	O-RING - 15/32 ID x 5/64 inch wide, boss end .....	1
39	S243728	HOSE - 630 mm long, see page 8-109, item 5 cross for continuation of the system .....	1

**CIRCUIT RELIEF VALVE AND MAIN RELIEF VALVE - 1978297C2**

REF.	PART NO.	DESCRIPTION	REQ'D.
	1978297C2	VALVE ASSEMBLY - circuit relief and main relief.....	1
1	1978295C1	WASHER - special.....	1
2	25934R1	NUT - jam, hex, 3/8" - 24 NF.....	1
3	NSS	SCREW - adjusting.....	1
4	NSS	O-RING - adjusting screw.....	1
5	NSS	SPRING - plunger.....	1
6	NSS	PLUNGER - relief valve.....	1
7	NSS	BODY - pilot plunger.....	1
8	NSS	O-RING - pilot seat.....	1
9	NSS	SEAT - pilot.....	1
10	NSS	O-RING - body, large.....	1
11	NSS	O-RING - body, small.....	1
12	NSS	RING - backup, O-ring.....	1
13	NSS	SPRING - poppet.....	1
14	NSS	O-RING - poppet.....	1
15	NSS	RING - backup, poppet O-ring.....	1
18	NSS	POPPET - relief valve.....	1
19	NSS	BODY - relief valve.....	1
20	237-6014	O-RING - 1-3/64 ID x 1/64 inch wide.....	1
21	238-5021	O-RING - 15/16 ID x 1/16 inch wide.....	1
22	1978265C1	RING - backup, small O-ring.....	1
	1986635C1	KIT - seal, contains items 4, 8, 10, 11, 12, 14, 15, 20, 21 and 22.....	1

**\*TOOL CYLINDER HYDRAULIC CIRCUIT**

REF.	PART NO.	DESCRIPTION	REQ'D.
1	1978153C1	VALVE ASSEMBLY - control, tool and boom, parts list page 8-19 .....	1
2	218-5069	ADAPTER - straight, 1-5/16-12 inch flare x O-ring boss.....	2
3	237-6016	O-RING - 1-11/64 ID x 7/64 inch .....	1
4	S243683	HOSE - 980 mm long, at control valve .....	2
5	S224607	TUBE - from hose at control valve to closed end of tool cylinder .....	1
6	S243517	TUBE - from hose at control valve to rod end of tool cylinder.....	1
7	S235936	HOSE - 49 inch long, intermediate.....	4
8	S517483	TUBE - intermediate.....	2
9	413-816	BOLT - hex, 1/2 NC x 1 inch .....	6
10	495-11053	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch .....	6
11	492-11050	WASHER - lock, 1/2 inch .....	6
12	S120173	CLAMP - tubes to arm.....	6
13	413-832	BOLT - hex, 1/2 NC x 2 inch .....	10
14	492-11050	WASHER - lock, 1/2 inch.....	10
15	495-11053	WASHER - flat, 17/32 x 1-1/16 x 3/32 inch .....	2
16	S243610	CLAMP - hoses to arm .....	4
17	S79656	CLAMP - tubes to arm.....	2

**\*NOTE:** See page 8-83 for the continuation of this circuit to the tool cylinder on models with a rigid arm. For the complete extendahoe hydraulic circuit see page 8-75.

1085C Cruz-Air Excavator  
**AUXILIARY HYDRAULICS**

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**MODELS WITH MATERIAL HANDLING BOOM AND ARM**

REF.	PART NO.	DESCRIPTION	REQ'D
1	1978153C1	VALVE ASSEMBLY - control, boom and tool, parts list page 8-19 .....	1
2	1978152C1	VALVE ASSEMBLY - control, arm and swing, parts list page 8-17 .....	1
3	218-5071	ADAPTER - straight, 3/4-16 flare x 1-5/16-12 inch O-ring .....	2
4	237-6016	O-RING - 1-11/64 ID x 7/64 inch wide.....	1
5	218-5077	ADAPTER - straight, 1-1/16-12 flare x 1-5/16-12 inch O-ring .....	2
6	237-6016	O-RING - 1-11/64 ID x 7/64 inch wide.....	1
7	S75824	HOSE - 8534 mm long, at arm and swing control valve.....	2
8	S121096	HOSE - 4648 mm long, at boom and tool control valve .....	2
9	218-444	ADAPTER - straight, 3/4-16 flare x 3/8 inch PT.....	4
10	S513782	VALVE - flow control .....	2
11	S242827	TUBE - to tool option .....	2
12	S75758	HOSE - 6248 mm long, to tool option .....	2
13	S242747	CLAMP - hose, three bolt hole, at boom .....	3
14	413-872	BOLT - hex, 1/2 NC x 4-1/2 inch .....	9
15	492-11050	WASHER - lock, 1/2 inch .....	9
16	S242836	CLAMP - hose, two bolt hole, at boom.....	3
17	413-864	BOLT - hex, 1/2 NC x 4 inch .....	14
18	492-11050	WASHER - lock, 1/2 inch .....	14
19	S242835	CLAMP - hose, at arm .....	4
20	218-5175	ELBOW - 45 deg, 1-1/16-12 inch flare x swivel str thread .....	2
21	218-735	CONNECTOR - straight, 3/4-16 inch flare.....	2
22	218-755	CAP - hex, 3/4-16 inch, if used .....	2
23	218-785	ADAPTER - reducing, 1-1/16-12 str thread x 7/8-14 inch flare.....	2
24	218-756	CAP - hex, 7/8-14 inch, if used .....	2

## TOOL CYLINDER

REQUIRES SEPARATE HYDRAULIC TUBE TO ROD END OF CYLINDER

REF.	PART NO.	DESCRIPTION	REQ'D.
	1986871C1	CYLINDER ASSEMBLY - 140 ID x 953 mm stroke, tool, if used .....	1
	1986870C1	TUBE ASSEMBLY - cylinder.....	1
1	NSS	TUBE - cylinder.....	1
2	S229548	BUSHING - tube .....	2
2A	S243186	SEAL - grease, bushing .....	2
3	219-1	FITTING - grease, straight, 1/8 PT x 21/32 inch.....	2
4	28-2456	BOLT - hex, 1-1/2 NF x 3-1/2 inch, grade 8.....	1
5	G104990	WASHER - flat, 1-1/2 inch, hardened .....	1
6	G105019	PISTON - cylinder.....	1
7	*S110890	RING - wear, piston.....	2
8	*S228606	SEAL - piston.....	1
	1980263C1	GLAND ASSEMBLY - cylinder.....	1
9	*238-5251	O-RING - gland.....	1
10	*G107971	RING - backup, gland O-ring .....	1
11	*G102427	BUSHING - gland .....	1
12	*G107998	SEAL - piston rod, narrow .....	1
13	NSS	GLAND - cylinder.....	1
14	*G109052	SEAL - U-cup.....	1
15	*D95146	WIPER - piston rod, outer.....	1
	1980292C1	ROD ASSEMBLY - piston, cylinder, 64 mm diameter .....	1
16	NSS	ROD - piston.....	1
17	S243185	BUSHING - piston rod.....	2
18	S243186	SEAL - grease, bushing .....	2
19	276-2446	SCREW - hex, self tapping, No. 8 NC x 3/8 inch.....	1
	*1980384C1	KIT - seal, includes all items with an asterisk .....	1

**NOTE:** Cylinder assembly part number is stamped on base end of cylinder tube.

## HYDRAULIC HAND CONTROL CIRCUIT

## RIGHT-HAND HAND CONTROL VALVE TO BOOM AND TOOL CONTROL VALVE

REF.	PART NO.	DESCRIPTION	REQ'D.
1	S517338	VALVE ASSEMBLY - hand control, right-hand, parts list page 8-113.....	1
2	163-39	SCREW - machine, hex washer head, No. 10 NC x 3/4 inch.....	4
3	218-5155	PLUG - hex, 9/16-18 inch O-ring boss.....	2
4	237-6006	O-RING - 15/32 ID x 5/64 inch wide.....	1
5	33261	GASKET - copper, inverted flare fitting.....	4
6	A18531	FITTING - special, inverted flare.....	2
7	S243382	BOLT - special, fitting.....	2
8	S243484	HOSE - 1150 mm long, from side ports on hand control valve to crosses under the cab floor plate.....	2
9	201-111	ADAPTER - straight, 9/16-18 inch face seal x O-ring boss.....	4
10	237-6006	O-RING - 15/32 ID x 5/64 inch wide, O-ring boss end.....	1
11	238-6011	O-RING - 5/16 ID x 1/16 inch wide, face seal end.....	1
12	S243448	HOSE - 1100 mm long, from ports on bottom of hand control valve to hoses to upper and lower ports of boom and tool control valve sections.....	4
13	S243440	HOSE - 2300 mm long, from hand control valve hoses to upper ports of boom and tool sections and lower port of boom section.....	3
13A	238-6011	O-RING - 5/16 ID x 1/16 inch wide.....	1
14	495-11066	WASHER - flat, 21/32 x 1-5/16 x 3/32 inch.....	1
15	D34033	CLAMP - hose.....	1
16	131-217	NUT - hex, self-locking, 3/8 inch NC, grade 8.....	1
17	201-111	ADAPTER - straight, 9/16-18 inch face seal x O-ring boss.....	2
18	237-6006	O-RING - 15/32 ID x 5/64 inch wide, O-ring boss end.....	1
19	238-6011	O-RING - 5/16 ID x 1/16 inch, face seal end.....	1
20	S243451	HOSE - 1650 mm long, from hand control valve hose to lower port of tool section.....	1
20A	238-6011	O-RING - 5/16 ID x 1/16 inch wide.....	1
21	1978153C1	VALVE ASSEMBLY - control, boom and tool, parts list page 8-19.....	1
22	L18337	STRAP - tie, hoses connected to hand control valve.....	UAR
23	218-5155	PLUG - hex, 9/16-18 inch O-ring boss.....	2
24	237-6006	O-RING - 15/32 ID x 5/64 inch.....	1
25	S243704	SCREW - set, orifice.....	2
26	S243703	ADAPTER - special, straight, 9/16-18 inch face seal x O-ring.....	2
27	237-6006	O-RING - 15/32 ID x 5/64 inch, O-ring boss end.....	1
28	238-6011	O-RING - 5/16 ID x 1/16 inch, face seal end.....	1
29	*201-421	TEE - 9/16-18 inch face seal branch x face x swivel face.....	2
30	238-6011	O-RING - 5/16 ID x 1/16 inch.....	2

**\*NOTE:** See page 8-111 for continuation of circuit from tee to high speed valve.

**1085C Cruz-Air Excavator  
SWING BRAKE**

REF.	PART NO.	DESCRIPTION	REQ'D.
	S616469	BRAKE ASSEMBLY - swing .....	1
1	413-820	BOLT - hex, 1/2 NC x 1-1/4 inch .....	4
2	492-11050	WASHER - lock, 1/2 inch .....	4
3	S38006	COVER - brake housing .....	1
4	S240926	COUPLING - splined .....	1
5	S242977	BRAKE ASSEMBLY - disc .....	1
6	S81615	DISC - brake .....	2
	S216242	ACTUATOR ASSEMBLY - brake .....	1
7	129-162	NUT - hex, jam, 5/16 inch NF .....	2
8	S68704	ACTUATOR - brake .....	2
9	S68705	SPRING - actuator .....	2
10	S68703	BALL - actuator, 3/4 inch diameter .....	3
11	S105785	STUD - link to actuator .....	2
12	S68707	LINK - brake actuator .....	2
13	S66646	BOLT - brake, rod to link .....	1
14	492-11038	WASHER - lock, 3/8 inch .....	1
15	S64912	CLEVIS AND ROD - brake actuator .....	1
16	*S603824	HOUSING - brake .....	1
17	S64921	BUSHING - brake housing to lever .....	1
18	S64920	BOLT - brake housing to lever .....	1
19	S203304	LEVER - brake actuator .....	1
20	131-205	NUT - hex, self-locking, 5/16 inch NC .....	1
21	129-163	NUT - hex, jam, 3/8 inch NF .....	1
22	S64911	NUT - special .....	1
23	S64913	BOOT - dust, housing .....	1
24	S203305	SHAFT - connecting, splined .....	1
25	B18206	RING - snap, shaft .....	1
26	S64915	PIN - dowel, brake housing to gearbox .....	1
27	S64311	SEAL - oil .....	1
28	S64910	PLUNGER - brake actuator cable .....	1
29	S230202	LEVER - cable to plunger .....	1
30	S10717	PIN - clevis, 1/4 x 1 inch .....	2
31	132-24	PIN - cotter, 3/32 x 1/2 inch .....	2
32	S510472	BRACKET - mounting, cable .....	1
33	S230205	BRACKET - lever return spring .....	1
34	S202938	SPRING - lever return .....	1
35	413-616	BOLT - hex, 3/8 NC x 1 inch .....	2
36	492-11038	WASHER - lock, 3/8 inch .....	2
37	**61-620	BOLT - hex socket head, 3/8 NC x 1-1/4 inch .....	3

\*B17423                      LOCTITE - 271 red, 50 ml bottle, use between item 16 and the swing gearbox cover.....UAR

\*\*B17422                      LOCTITE - 242 blue, 50 ml bottle, use with item 37 bolts.....UAR

**NOTE:** See page 9-5 for swing brake lever and cable.

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