

CONDOR

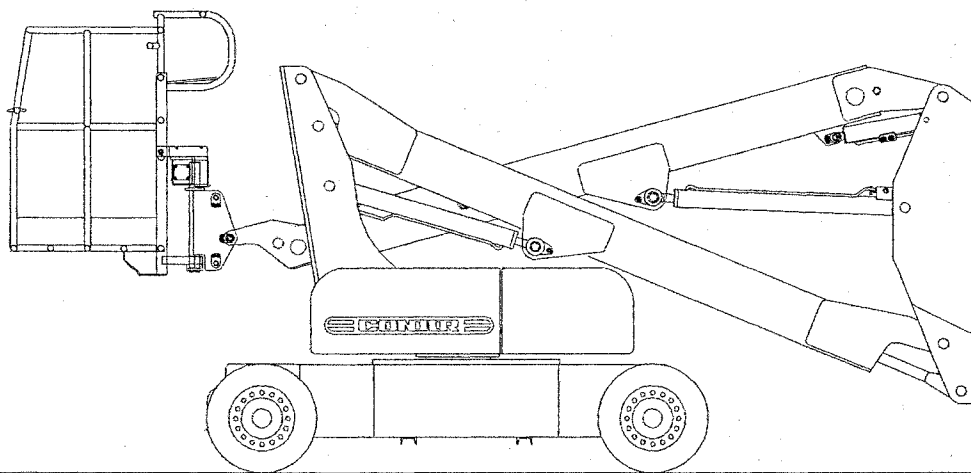
TIME CONDOR Corporation



OPERATOR'S, SERVICE AND PARTS MANUAL

ARTICULATING
MODEL A38/42J

BOOM-SUPPORTED ELEVATING WORK PLATFORM



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SAFETY RULES AND PRECAUTIONS (Continued)

 **WARNING**

- Actuation of the red “EMERGENCY STOP” button will apply brakes immediately, causing unexpected platform movement as the machine comes to a sudden stop. Brace yourself.
- Whenever disengaging the brakes or before disconnecting from towing vehicle, ensure that the unit cannot roll.
- Immediately report any erratic noises, vibrations or malfunctions of the unit to supervisor. Machine must be removed from service until diagnosis and any necessary repairs have been completed.
- Operating this equipment without all safety and control decals in place can be hazardous.

 **CAUTION**

- For transporting the machine, the platform must not be tied to the trailer bed.
- Be sure to turn all hydraulic valves back “ON” before starting the machine, or extensive pump damage will occur.
- **DO NOT** exceed the maximum platform horizontal pull of 100 lbs. (45.4 kg).
- **DO NOT** use the boom or platform as a crane to lift oversized or hanging loads.
- **DO NOT** raise, extend, retract, tilt, rotate, or lower the platform or booms into stationary objects, as this will cause damage to mechanical and hydraulic components.
- **DO NOT** use the platform or boom functions to push or tow the unit or another vehicle.
- Avoid sudden braking or steering, go slowly and leave more maneuvering room during cold weather operation until the machine is warm.

**OPERATOR CONTROLS DESCRIPTION
(PLATFORM CONTROLS, CONTINUED)**

Item	Control	Location	Description
11.	Steer Switch	On end of Drive Lever	Move switch left and hold to turn Steer Wheels to left, and right to turn Steer Wheels to right. Push and hold in opposite direction to straighten Wheels.
<div data-bbox="886 499 974 573" data-label="Image"> </div> <div data-bbox="1008 483 1377 552" data-label="Section-Header"> <h2>WARNING</h2> </div>			
<p>WITH PLATFORM SWUNG OVER THE STEERING WHEELS, USE CAUTION WHEN SELECTING THE STEERING DIRECTION. STEERING DIRECTION WILL BE OPPOSITE STEER SWITCH MOVEMENT.</p>			
12.	Proportional Control Knob	On Platform Console Panel	The Proportional Control Knob controls the speed of all hydraulic functions except steering (upper boom, lower boom, jib, and swing). To increase the speed of a hydraulic function, rotate the Control Knob to the right (counterclockwise). To decrease the speed of a boom function, rotate the Control Knob to the left (clockwise).
13.	Horn Button	On Platform Console Panel	Press button to sound warning horn.

SHUT -DOWN PROCEDURES

- When finished with the machine, place the booms in the stowed position.
- Park the unit on a level surface.
- Turn "OFF" the "GROUND/PLATFORM" key switch. Remove key to prevent unauthorized operation.

MOVING JOB SITE TO JOB SITE

- Inspect the outside of the unit for damage (including the underside). Inspect all hoses, and boom sections for chafing or road damage. Confirm that all wheel lug nuts and swing bearing bolts are tight (refer to specifications).

UNLOADING PROCEDURES

- Remove all machine tie downs. Remove wheel chocks, if used. Switch the "GROUND/PLATFORM" key switch to "PLATFORM".
- Enter the platform, and test all platform functions.
- Raise the boom and the jib so that the platform will clear any obstacles as the machine is driven down the loading ramp.
- Carefully drive the unit off the truck or trailer .
- Before placing the unit into service, all operators must read and understand the contents of this Operator's Manual.

Upon initial unloading of the machine the "Predelivery Inspection Report" must be completed and returned in order to activate the Time Condor Limited Warranty.

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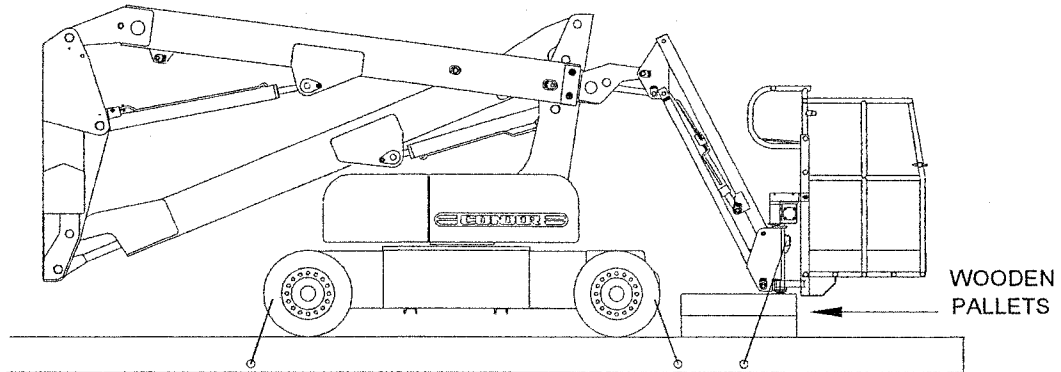
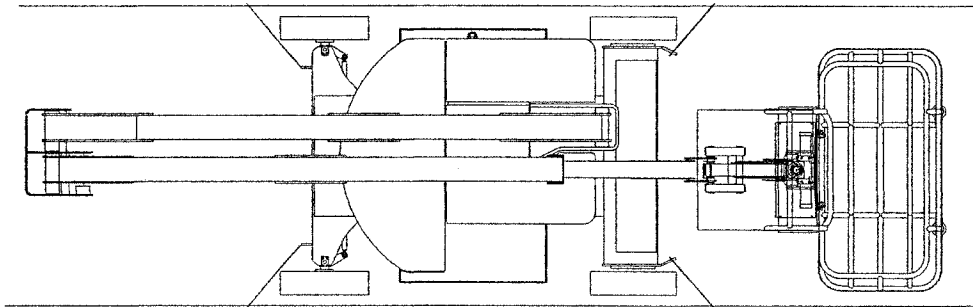
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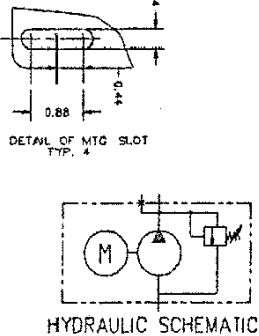
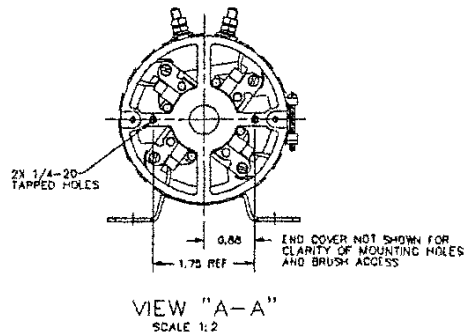
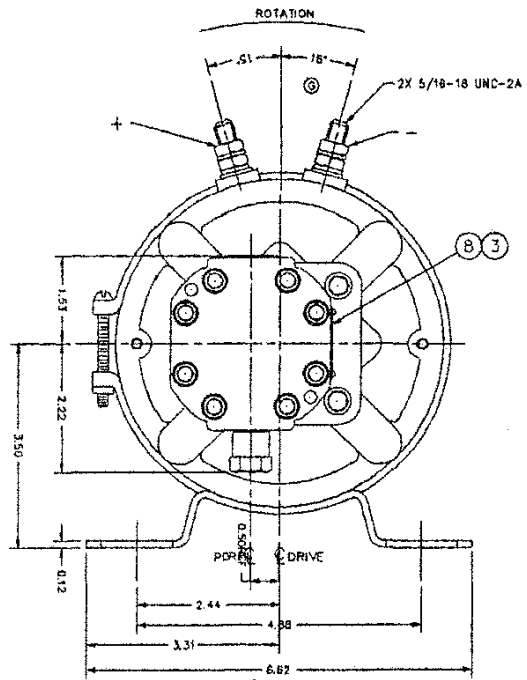
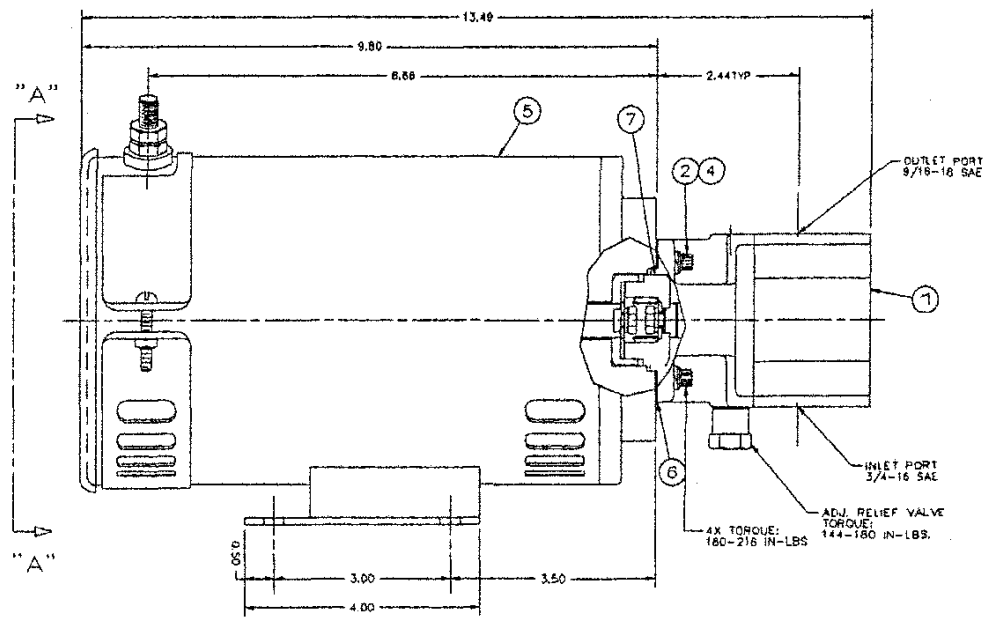
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FACTORY RECOMMENDED TRANSPORTATION DIAGRAM



76546



NOTES (UNLESS SPECIFIED OTHERWISE)

- DIMENSIONS ARE NOMINAL EXCEPT WHERE TOLERANCED
- MARK NAMEPLATE AS NOTED BELOW
- J58 P/N 2600026 REQUIRED IN ORDER TO MAKE PUMP/MOTOR UNIT "EE" RATED. THIS UNIT, AS SHOWN, IS NOT "EE" RATED.
- NO NOTICEABLE SOUND LEVEL DIFFERENCE IS ALLOWED WHILE OPERATING FROM CRACKING TO RELIEF VALVE FULL BY-PASS PRESSURE.
- PUMP TO BE PAINTED BLACK

JOHN S. BARNES CORP ROCKFORD, ILL.	
DATE CODE	
27072B	

CUSTOMER: _____ PART NUMBER: _____

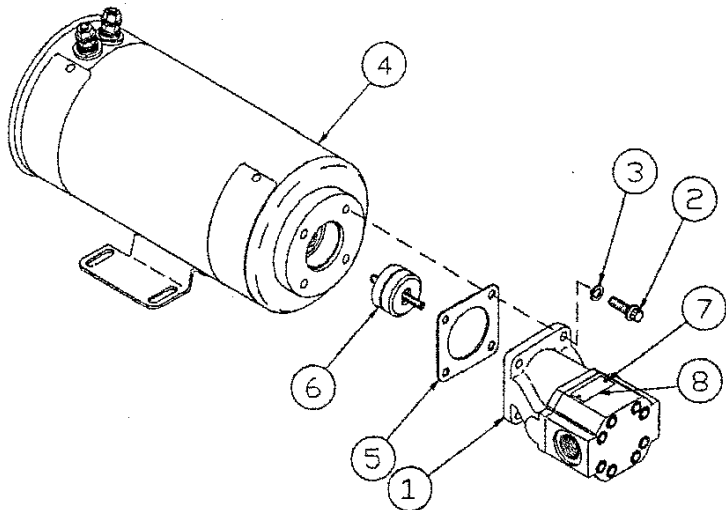
GENERAL DATA: PUMP DISPLACEMENT OF _____ CU. IN./REV. (_____ CC/REV.)
 MOTOR _____ VOLTS _____ FRWL. CLASS "F" INSULATION
 DESIGNED TO MEET UL RATING _____

TEST DATA: USING 200 SSU (43 cST) FLUID
 SET FULL BY-PASS RELIEF AT 2000 PSI (139.6 BAR)
 UNIT TO DELIVER 1.0 GPM (_____ LITERS/MIN)
 AT 2000 PSI (_____ BAR)

REV	DATE	BY	CHKD	APPD	DESCRIPTION
1	09/06/97	XXX	XX/XX/XX		X
2	XX/XX/XX	XXX	XX/XX/XX		X
3	XX/XX/XX	XXX	XX/XX/XX		X
4	1:1				PUMP AND DC MOTOR
5	1				27072B00 00

MANUAL 92379-002
 May 1998
 Revised 11/98

ITEM	BARNES P/N:	DESCRIPTION	QTY	CONDOR SERVICE P/N
1	10D3257	FLUID PUMP ASS'Y	1	76021-101
2	2130087	SCREW (5/16-18)	4	76021-102
3	2150042	LOCKWASHER (5/16)	4	76021-103
4	2200947	MOTOR	4	76021-104
5	2260064	MOUNTING GASKET	1	54989-100
6	2390061	COUPLING KIT	1	54760
7	2130150	TAG NAIL	2	
8	2410004	NAMEPLATE	1	



VENDOR: J.S. BARNES
 VENDOR P/N: 27072B00

UNLESS OTHERWISE NOTED:		TOLERANCES:		DIMENALS	
FRACTIONS 1/8		DECIMALS		PUMP/MOTOR ASSY, 48VDC	
ANGLES 2°		30 & 60		DRAWING NO. 76021	
SURFACE FINISH		PROJECTION OF VIEWS		REV. B	
LTR	D.C.N. HG.	DATE	APPR	CHECKED	DATE
		5/5/98	JB	COLEMAN	5/15/97
LTR	D.C.N. NO.	DATE	APPR	APPROVED	DATE
					10/2/97

CAUTION

DO NOT charge batteries with the Electronic Timer Kit bypassed. The charger will remain on as long as the power supply cord is connected to an outlet. Severe overcharging and eventual damage to batteries will result.

If the transformer does not hum and the ammeter still does not register with the Electronic Timer Kit by-passed, a continuity check of the charger AC circuit is necessary. Disconnect the power supply from its outlet and the DC output connector from the battery connector and, with a suitable continuity tester, check the circuit across the power supply cord prongs. With the Electronic Timer Kit bypassed, the **CIRCUIT SHOULD BE COMPLETE**. If the circuit is not complete, individually check the continuity of the power supply cord, primary transformer coil and all connections.

PART B — RELAY CLOSSES BUT NO TRANSFORMER HUM AND AMMETER DOES NOT REGISTER

Check to be sure the power supply cord is securely connected to a live AC outlet. When three-prong to two-prong adapters are used, they tend to work loose resulting in a poor connection. Check the AC line fuse or circuit breaker and, if possible, measure the AC line voltage at the outlet to be sure AC power is present. If necessary, connect a functioning charger, utility light or other electrical appliance to the outlet to verify the presence of AC power.

If AC power is present, disconnect the power supply cord from its outlet and the DC output connector from the battery connector. By-pass the Electronic Timer Kit as described in Section 1, Part A, and with a suitable continuity tester check the circuit across the power supply cord prongs. With the Electronic Timer Kit bypassed, the **CIRCUIT SHOULD BE COMPLETE**. If the circuit is complete, refer to the wiring diagram and check the relay wiring and all connections. If the circuit is not complete, check the wiring of the power supply cord, transformer primary coil leads and the Electronic Timer Kit. If the charger is wired correctly, individually check the continuity of the power supply cord, transformer primary coil and relay.

PART C — RELAY CLOSSES AND TRANSFORMER HUMS BUT AMMETER DOES NOT REGISTER

If the relay closes and the transformer hums, the charger AC circuit and Electronic Timer Kit are functioning properly. If the ammeter does not register, a fault in the charger DC circuit exists and a continuity check must be performed. Disconnect the power supply cord from its outlet and the DC output connector from the battery connector, and check the charger fuse. If a fuse link is blown, refer to Section 2 - "Charger Fuse Blows" for further tests. If the fuse checks good, use a low voltage continuity tester to perform the following tests:

1. Connect the tester leads to the charger DC output connector and note the reading. Reverse the tester leads and check the output connector again. The circuit should be complete in only one direction. If the circuit does not conduct in either direction and the fuse is good, individually check the continuity of the DC output cord, ammeter, diodes and all connections. If the circuit conducts in both directions, a "short" exists in the charger DC circuit. First check the DC output cord for a "short" between the two wires. It is more likely that one or both diodes have "shorted." Refer to Section 2 - "Charger Fuse Blows" for continuity test of diodes.

STEP 2 — HYDROMETER TEST

Using the hydrometer, measure and record the specific gravity, corrected to 80 degrees F (26.7 C) of the electrolyte in each cell. If the range (highest-lowest) is 50 points (0.050 sp.gr.) or greater or the lowest is less than 1.225 sp.gr., charge the battery at the recommended rate or until all cells are 1.225 sp.gr. or greater and the range is less than 50 points. If no amount of charging will achieve these conditions, replace the battery. If these conditions are achieved, apply a 150 amp load for 15 seconds to remove the surface charge on the battery and continue to Step 3.

The average state of charge of the cells in a battery can be determined by measuring the stabilized voltage of the battery. The voltage is stabilized if the battery has been on open circuit overnight or for a period of several hours. A voltage reading of 12.4 (6.2 on a 6-volt battery) is equivalent to a specific gravity of 1.225. The disadvantage of measuring the open circuit voltage is that a lower voltage cell can be masked by the remaining cells. If the cell connectors are accessible for voltage measurements, a range of 0.05 volts between the highest and lowest cells corresponds to a 50 point variation in specific gravity. A cell voltage of 2.07 is equivalent to a specific gravity of 1.225.

STEP 3 — ADJUSTABLE LOAD TEST

The following instructions are intended as guidelines. When available, the instrument manufacturer's instructions should be followed. Follow all precautions.

- A. Disconnect battery cables starting with ground cable.
- B. Measure temperature of a center cell. If instrument has an integral temperature compensator, use attached probe.
- C. Connect voltmeter and load test leads to appropriate battery terminals, make certain terminals are free of corrosion.
- D. Connect current transducer (if necessary) to appropriate lead.
- E. Apply test load equivalent to 50% of Cranking Performance rating of battery for 15 seconds. If Cranking Performance is unavailable, use 3 times the 20 ampere-hour capacity.
- F. Read the voltage at 15 seconds, then remove the load.
- G. Determine minimum voltage required at electrolyte test temperature from chart in Figure X.
- H. If test voltage is above minimum, return battery to service.
- I. If test voltage is below minimum, replace battery.

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DRIVE SYSTEM SEVCON BOOM CONTROLLER Cont.

Electric Brake

The ELECTRIC BRAKE will be supplied from the positive side through the emergency switch and from the negative side through the FWD and REV driver. Therefore, the ELECTRIC BRAKE will be applied when no DIRECTION contactor is energized (i.e. in NEUTRAL, during PUMP mode, or if a fault condition is forcing neutral).

The brake time constant should be slow enough that it will not operate during direction contactor changeover (of the order of 0.25 Seconds).

The ELECTRIC BRAKE must be rated at the same voltage as the contactor coils. The current consumption of the brake should be such that the 3 amp overcurrent limit is not exceeded by the contactor coil and brake current, combined. If the combined current consumption of the coil and brake will exceed 3 amps, an auxiliary relay will be needed to drive the brake.

Modes of Operation

The following sections define the required modes of operation:

TRACTION Motor Drive

Drive in either FORWARD or REVERSE will start only if the following conditions are satisfied:

PUMP switch off.
No procedure or diagnostic faults present.
FWD or REV selected as appropriate.

Once in TRACTION mode activating the PUMP switch shall not cause TRACTION mode to be exited, the PUMP/TRACTION contactor drive shall not be energized (shall be left at the TRACTION position). If the PUMP switch is selected during TRACTION, a procedure fault will occur when NEUTRAL is selected, remaining until the PUMP switch and both DIRECTIONS are no longer selected.

When NEUTRAL is selected the controller will control smooth stopping of the vehicle, using PLUG BRAKING, before the ELECTRIC BRAKE is allowed to operate.

If the PUMP switch is activated in NEUTRAL, when the vehicle has stopped and the BRAKE is applied, then PUMP mode will become operational.

PUMP Motor Drive

PUMP motor drive will start only if the following conditions are satisfied:

FWD and REV switch off.
Traction mode off (brake applied)

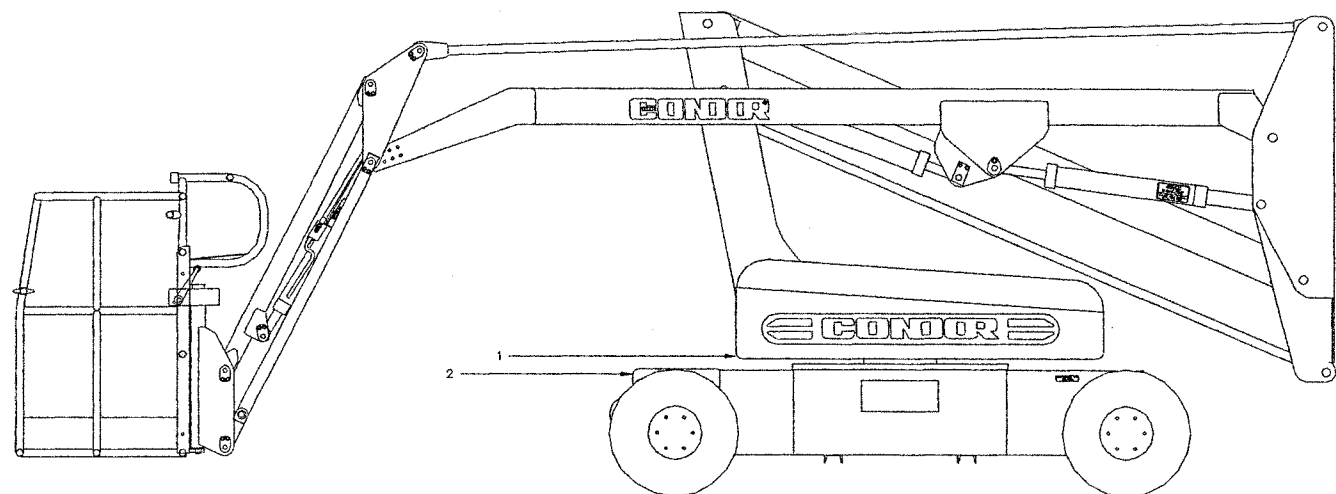
No procedure or diagnostic faults present.
PUMP switch selected.

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MONTHLY OPERATIONAL CHECKLIST (CONTINUED)

INITIAL	DESCRIPTION
_____	8. Check adjustment and security of swing drive motor assembly. There should be a slight amount of backlash between the turret and chassis when properly adjusted. Check torque of mounting bolts .
_____	9. Check oil level in swing drive gear box.
_____	10. Check oil level in power hubs .
_____	11. Check that tires are not leaning in or out.
_____	12. Check that wheel spindles turn freely, with no end play.
_____	13. Check drive wheel power hub mounting bolt torque.
_____	14. Check that neither the main boom nor jib boom drift with a full load, when there is no hydraulic pressure.
_____	15. Check to make sure boom sections are not dented or bent.
_____	16. Check that all adjustable flow valves are locked. Check settings if any are not locked.

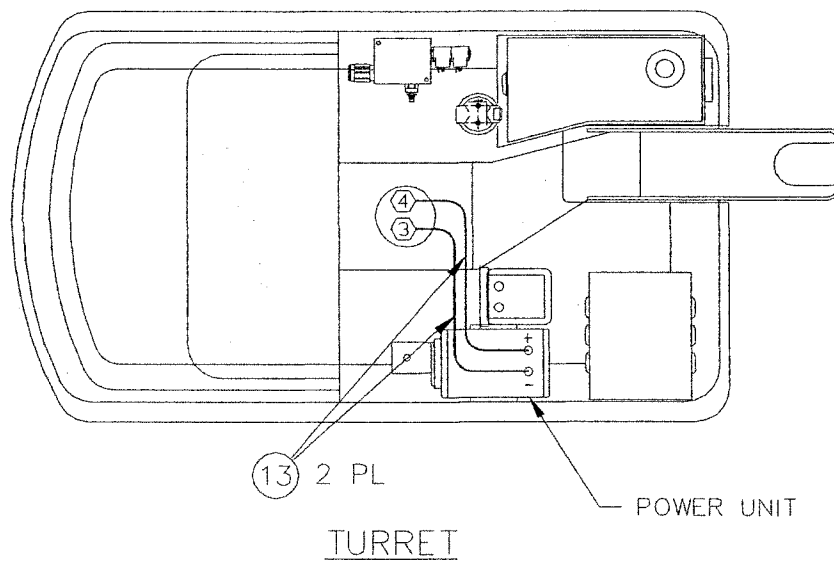
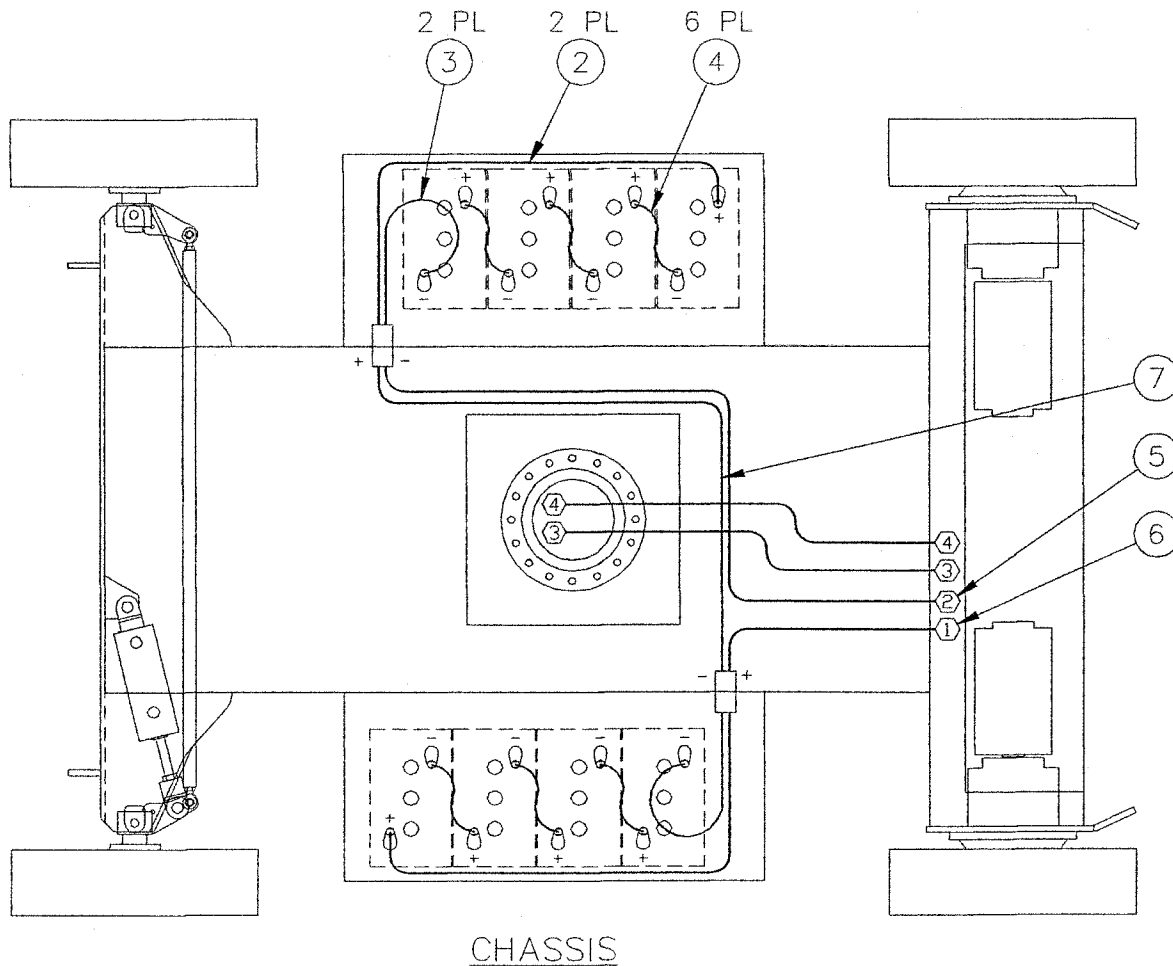


The CONDOR® Model A38/42J Serial Number is stamped in two locations on the machine.

1. The first place the serial number is located is on the right hand side, stamped on the top of the rear axle housing.
2. The second place the serial number is located is on the right hand side at the rear of the turret.

The Data Plate is located at the right hand side in front of the axle.

FIGURE 2.4: Battery Cable Kit



ITEM	PART NUMBER	DESCRIPTION	QTY
Ref.	76465	Hose Kit, A38/42J	Ref.
1	76465-DWG	Hose Kit Installation DWG; A38/42J	1
2	66044-276.00	Hose Assembly #04 67685 J37 ST-ST	1
3	66044-276.00	Hose Assembly #04 67685 J37 ST-ST	1
4	66848-087.00	Hose Assembly #04 67685 J37 ST-90L	1
5	66848-087.00	Hose Assembly #04 67685 J37 ST-90L	1
6	66044-100.00	Hose Assembly #04 67685 J37 ST-ST	1
7	66044-100.00	Hose Assembly #04 67685 J37 ST-ST	1
8	66044-041.00	Hose Assembly #04 67685 J37 ST-ST	1
9	66044-041.00	Hose Assembly #04 67685 J37 ST-ST	1
10	66698-046.00	Hose Assembly #06 66645 J37 ST-ST	1
11	66698-043.00	Hose Assembly #06 66645 J37 ST-ST	1
12	66698-043.00	Hose Assembly #06 66645 J37 ST-ST	1
13	66044-312.00	Hose Assembly #04 67685 J37 ST-ST	1
14	66044-312.00	Hose Assembly #04 67685 J37 ST-ST	1
15	66044-300.00	Hose Assembly #04 67685 J37 ST-ST	1
16	66044-300.00	Hose Assembly #04 67685 J37 ST-ST	1
17	66044-246.00	Hose Assembly #04 67685 J37 ST-ST	1
18	66044-246.00	Hose Assembly #04 67685 J37 ST-ST	1
19	66044-012.00	Hose Assembly #04 67685 J37 ST-ST	1
20	66044-012.00	Hose Assembly #04 67685 J37 ST-ST	1
21	66044-600.00	Hose Assembly #04 67685 J37 ST-ST	1
	66044-612.00	Hose Assembly #04 67685 J37 ST-ST	1
22	66044-600.00	Hose Assembly #04 67685 J37 ST-ST	1
	66044-612.00	Hose Assembly #04 67685 J37 ST-ST	1
23	66044-576.00	Hose Assembly #04 67685 J37 ST-ST	1
24	66044-576.00	Hose Assembly #04 67685 J37 ST-ST	1

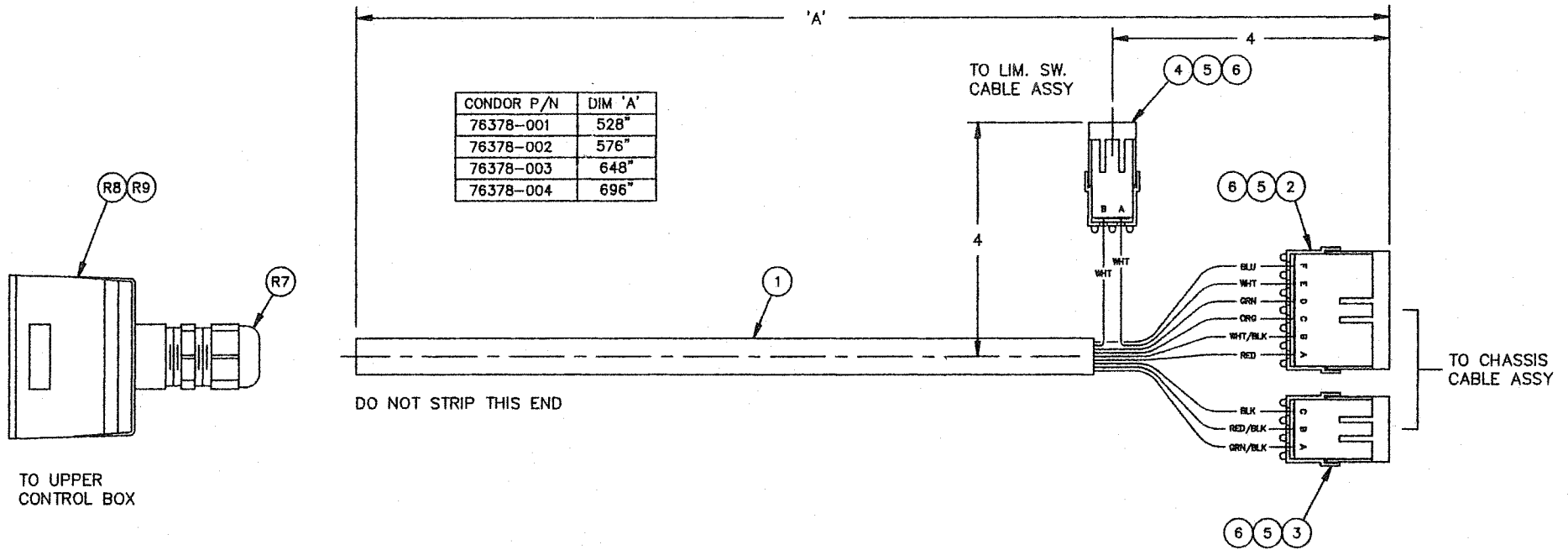
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ITEM	PART NUMBER	DESCRIPTION	QTY
Ref.	76483	Boom Installation; A38	Ref.
1	76066-006	Pin Weldment; Slave Cylinder Base End	1
2	76069	Pin Cap; 1" DIA Pin	1
3	76066-007	Pin Weldment; Master Cylinder Rod End	1
4	76069	Pin Cap; 1" DIA Pin	1
5	76066-008	Pin Weldment; Master Cylinder Base End	1
6	76069	Pin Cap; 1" DIA Pin	1
7	76129	Lift Cylinder, Lower Boom	1
8	76130	Lift Cylinder, Upper Boom	1
9	76464	Cylinder Assembly; A38 Boom Ext	1
10	76208	Bearing Pad; ADJ 1 1/4-7 UNC	4
11	76256	Base Boom Weldment; A38	1
12	76267-001	Pin Weldment, 2" DIA x 11.68" LG	2
13	76269	Pin Cap; 2" Pin	2
14	76267-002	Pin Weldment; 2" DIA x 11.12" LG	4
15	71983	Rubber Pad, 5"x5"x1/4"	5
16	76267-003	Pin Weldment; 2" DIA x 7.18" LG	2
17	37398-002	Wrap-Track/Boom	1
18	76274	Boom Weldment; A38 Lower	1
19	76275	Tension Link Weldment; Lower Boom	1
20	76282	Wear Pad; A38 Tip/Base Top	1
21	76283	Wear Pad; A38 Tip/Base Bottom	1
22	76294	Wear Pad; Base/Mid Boom Bottom	1
23	76295	Wear Pad; Base/Mid Top	1
24	76308-001	Pin; Ext Cylinder Rod End	1
25	76308-002	Pin Ext Cylinder Base End	1
26	76311	Wear Pad; .50 x 1.00 x 2.50	2
27	76312	Mid-Post Weldment A38	1
28	76337	Hose Carrier Installation; A38	1
29	76127	Master Cylinder; Upper Boom	1
30	76128	Slave Cylinder; Upper Boom	1
31	76257	Boom Weldment; A38 Tip	1
32	81494-002	Cover - 86A Arm Hose 77 1/2" LG	1
33	76427	Retainer; A38 Hydraulic Hose	1
34	BOW36835	Bolt .38-16UNC x 1.25 Flat SOC	2
35	BOW34272	Nut -25-20UNC Nylon Lock	6
36	76267-004	Pin Weldment; 2" DIA x 10.56" LG	2
37	76471	Cable Clamp; A38	1
38	76472	Cover Base Boom, A38	2
39	BOW36000	Screw .25-20UNC .50" HD Cap Hex	4
40	BOW36701	Washer - 1/4 Flat	4
41	BOW31325	Washer-.25ID Split Lock	4
42	BOW36818	Screw, Cap Flat Head .25-20UNC 2L	2
43	37398-004	Wrap-Track 3146/54	3

- Indicates Items Not Shown

ITEM	PART NUMBER	DESCRIPTION	QTY
Ref.	A42J-Jib	Jib Installation	Ref.
1			
2	76040	Lift Cylinder; Jib	1
3	76066-003	Pin Weldment; Jib Adapter	3
4	76069	Pin Cap; 1" DIA Pin	3
5	76066-004	Pin Weldment; Jib Cylinder Rod	1
6	76069	Pin Cap; 1" DIA Pin	1
7	76066-005	Pin Weldment; Jib To Boom	1
8	76069	Pin Cap; 1" DIA Pin	1
9	76230	Jib Weldment; Upper	1
10	76237	Jib Weldment; Lower	1
11	76296	Adapter Weldment; Jib	1

76378-004



CONDOR P/N	DIM 'A'
76378-001	528"
76378-002	576"
76378-003	648"
76378-004	696"

CONNECTOR C1 (10 PIN)		
PIN	WIRE NO.	FUNCTION
1	BLU	LIMIT SW. OUTPUT TO PUMP SP. CONT.
2	WHT	INPUT FROM LIMIT SWITCH
3	GRN	DRIVE FORWARD
4	ORG	DRIVE REVERSE
5	WHT/BLK	TRACTION ACCELERATE
6	BLK	GROUND
7	RED/BLK	GROUND
8	GRN/BLK	GROUND
9	RED	INPUT FROM LEVEL SENSOR WHEN LEVEL
10	ORG/BLK	SPARE

ITEM	PART NUMBER	QTY	QTY	QTY	QTY	UM	DESCRIPTION
R9	65358	1.00	1.00	1.00	1.00	EA	HOOD, 10 CONTACT
R8	66992	1.00	1.00	1.00	1.00	EA	PLUG, 10 CONTACT
R7	54910-105	1.00	1.00	1.00	1.00	EA	STRAIN RELIEF, ST21
6	65351-010	11.00	11.00	11.00	11.00	EA	CABLE SEAL, GREEN
5	65351-134	11.00	11.00	11.00	11.00	EA	TERMINAL, 16-14GA MALE
4	65351-042	1.00	1.00	1.00	1.00	EA	CONNECTOR, SHROUD 2 CC
3	65351-044	1.00	1.00	1.00	1.00	EA	CONNECTOR, SHROUD 3 CC
2	65351-048	1.00	1.00	1.00	1.00	EA	CONNECTOR, SHROUD 6 CC
1	67295-023	58.00	54.00	48.00	44.00	LF	CABLE, 16GA/10C

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