



Electronic Service Manuals

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Castex
1515
23,03EP

Max Trac

Battery and Electric Powered
Wide Area Vacuums

Reference Manual

This Manual Revised 5-90



WV30
3116

Machine Serial Number

WV30 1586GK

Castex®

The Specialists in Carpet Maintenance

**READ MANUAL CAREFULLY
BEFORE OPERATING MACHINE**

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800-283-7871 616-392-6966
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A. MAX TRAC SET UP:

MAX TRAC ELECTRIC, (Model No. WV3000):

1. Your new Max Trac Electric is shipped fully assembled. Plug the 75' power cord into a grounded 120 volt A.C. outlet as shown in **Figure 1**.

If your outlet contains no grounding hole, you must use an adapter. This adapter must be connected to an outlet with a grounded receptacle box using the cover plate screw to secure the adapter's ground pin. See **Figure 2**.

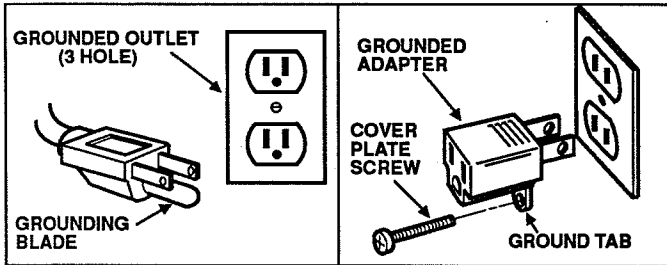


Figure 1

Figure 2

WARNING!!! To avoid an electrical hazard, the Max Trac must be grounded while in use to protect the user from electric shock and serious injury!

WARNING!!! Electric shock could occur if used on wet surfaces. DO NOT use this vacuum where explosive vapors or dust are present in the air. Such use creates an explosion hazard which can cause serious injury.

2. Attach the belt clip to your belt as shown in **Figure 3**, then connect the 75' extension cord to the power cord on the Max Trac, (North American models only).



Figure 3

MAX TRAC BATTERY, (Model No. BWV3000):

IMPORTANT: Use sealed lead-acid batteries only. Use a charger designed for use with these batteries. The charger must have a finishing rate of 28.5 - 29 volts.

Max Trac Battery models are shipped with batteries outside the machine. To install the batteries, follow these steps:

1. Open the rear hopper door. This raises the vacuum motors to make battery installation easier.
2. Remove the white vacuum covers, (or remove the HEPA filters if your Max Trac is equipped with them).
3. Carefully place the batteries into their compartments according to **Figure 4**. **NOTE:** It will be necessary to tip the batteries to get them into the compartments. The batteries are sealed and will not spill acid.

Make sure that the battery post positions match those in **Figure 4**.

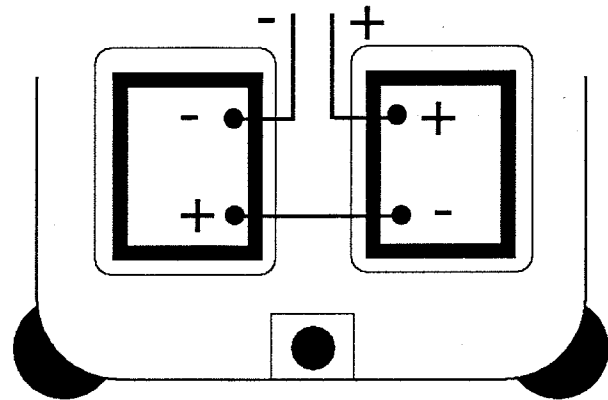


Figure 4

4. Attach the jumper wire, (taped inside the battery compartment for shipping), from the front left (+) terminal to the front right (-) terminal as shown.
5. Attach the two wires labeled (+) or positive to the right rear (+) terminal.
6. Attach the remaining bundle of five wires labeled (-) to the left rear (-) terminal.

Battery charging instructions:

WARNING!!! Always charge the Max Trac with the front cover off and keep sparks or flame away! Batteries produce combustible gas when charging.

1. Connect the charger plug to the Max Trac charging receptacle. Insert the plug and twist clockwise to lock.
2. Turn the charger dial to 12 to begin charging. The charger will now run for 12 hours.
3. You may safely leave the charger connected to the batteries for the full 12 hours. The charger will automatically reduce its output if the batteries reach full charge before 12 hours.

B. OPERATING THE MAX TRAC:

1. Turn on the Master Switch and adjust the brush. See the BRUSH HEIGHT decal at the front of the Max Trac. The brush is adjusted properly when the bristles flick lightly against the carpet. *Do not lower the brush too far.* This reduces the "flicking" action of the brush and reduces pickup.
2. Push the Max Trac forward over the soiled carpet.
3. Stop the Max Trac after each half hour of operation to clean the filter tubes. Turn off the Master Switch, then push the shaker handle up and down vigorously five times as shown in **Figure 5**. This knocks dirt out of the filter tubes for full airflow and best dirt recovery.

IMPORTANT: You must turn off the Master Switch when cleaning filters to allow all dirt to fall out of the filter tubes and into the hopper. Empty the hopper after cleaning the filter tubes.

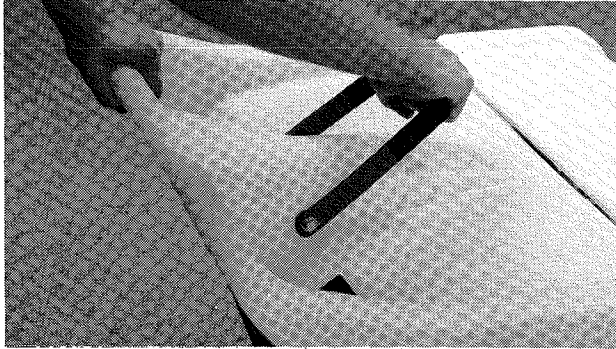


Figure 5

4. When the hopper becomes full, it must be emptied. Open the hopper door, pull out the hopper and empty. Replace the hopper and close the door, making sure that the filter housing seals over the top of the hopper as shown in **Figure 6**.

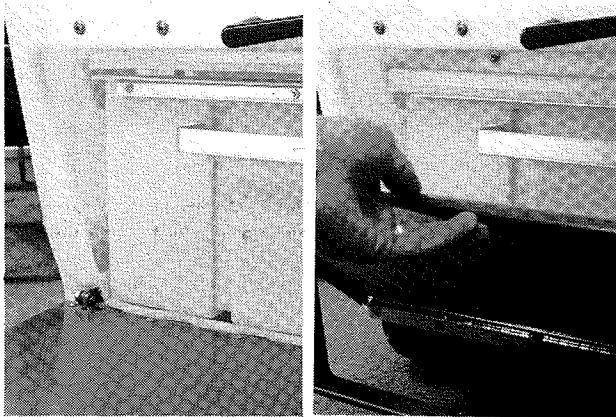


Figure 6

Unclogging the brush:

The Max Trac's brush motor is protected by a circuit breaker in case of clogging by carpet fibers or debris. If the brush clogs, the circuit breaker button will pop out. To unclog the brush and reset the brush circuit breaker, follow these steps.

WARNING!!! Disconnect power before attempting to service the brush! If you own an electric powered Max Trac, unplug the power cord. If you own a battery powered Max Trac, turn off the Master Switch, then remove the black jumper wire between the front positive terminal and the front negative terminal. See **Figure 7**. This prevents moving parts from accidentally starting and causing severe injury.

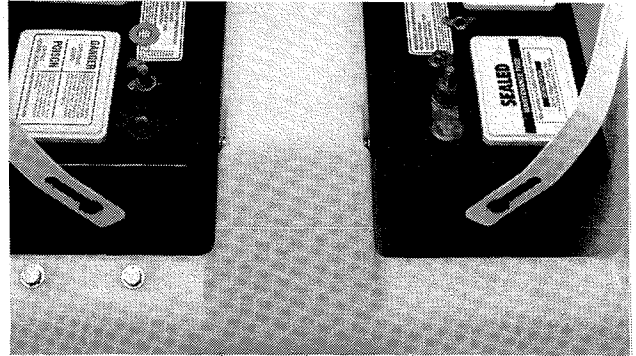


Figure 7

1. After disconnecting power to the Max Trac, tilt the vacuum backward so it rests on the rear handle.
2. Check the brush and bearing for carpet strands wrapped around it. Remove any clogging material.
3. Push the circuit breaker button to reset the circuit breaker. The circuit breaker is located near the Master Switch on the Max Trac Electric. On the Max Trac Battery, the circuit breaker is located on the plate between the batteries.

C. SUGGESTED MAINTENANCE:

BATTERY MAINTENANCE, (Model #BWV3000):

1. Keep the battery terminal posts clean for good contact.
2. Inspect the battery cables for good terminal connections and worn wire insulation. Replace worn cables.
3. The batteries require no maintenance. It is not necessary to add water.
4. Periodically inspect the charger plug and the charging receptacle on the Max Trac.

REGULAR MAINTENANCE:

1. Once monthly, inspect the brush for wear. The bristles should wear evenly across the width of the brush. When the bristles become worn, you can adjust the brush to extend its life. Follow these steps:

WARNING!!! Disconnect power before servicing brush! Unplug the power cord or if you own a battery powered Max Trac, turn off the Master Switch, #126 then remove the black jumper wire between the front positive terminal and the front negative terminal. See Figure 7. This prevents moving parts from accidentally starting and causing severe injury.

1. Remove the belt cover, #64 and the carpet shoe, #66 as shown in Figure 8.

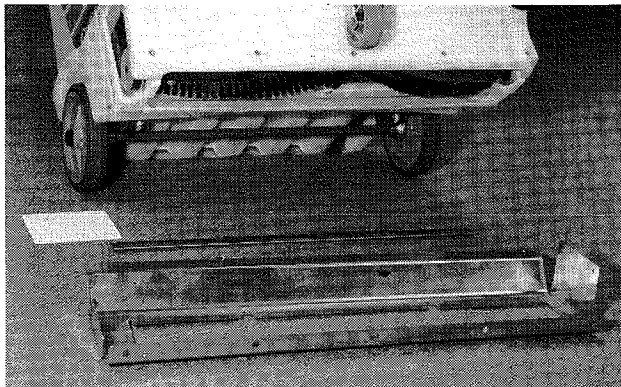


Figure 8

2. Pull the bearing block out of the housing on the side opposite the drive belt. See Figure 9.

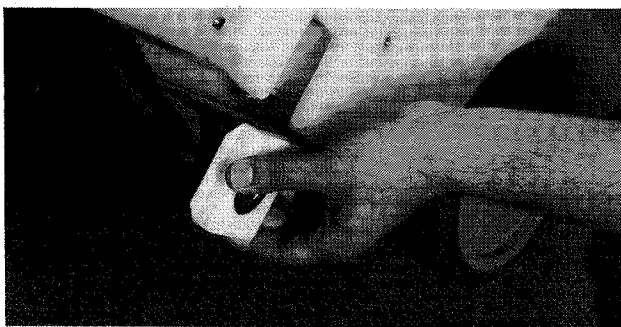


Figure 9

3. Remove the entire brush with its pulley from the Max Trac housing.

4. Rotate both bearing blocks 180 degrees and re-install with the longer side to the top. Figure 10 shows the bearing blocks in their original position with the short side up. Figure 11 shows how they should be re-installed with the longer side up. This lowers the brush 3/16" closer to the floor for extended life.

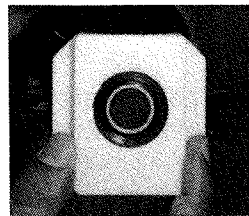


Figure 10

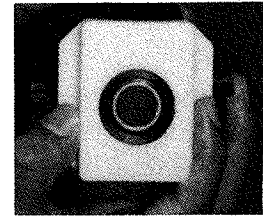


Figure 11

To reinstall the drive belt, you will need to lower the brush motor to provide enough slack. Follow the steps below:

1. Loosen the four bolts on the motor lock plate as shown in Figure 12.

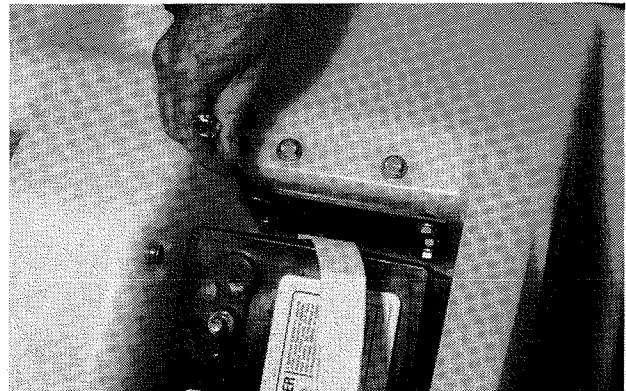


Figure 12

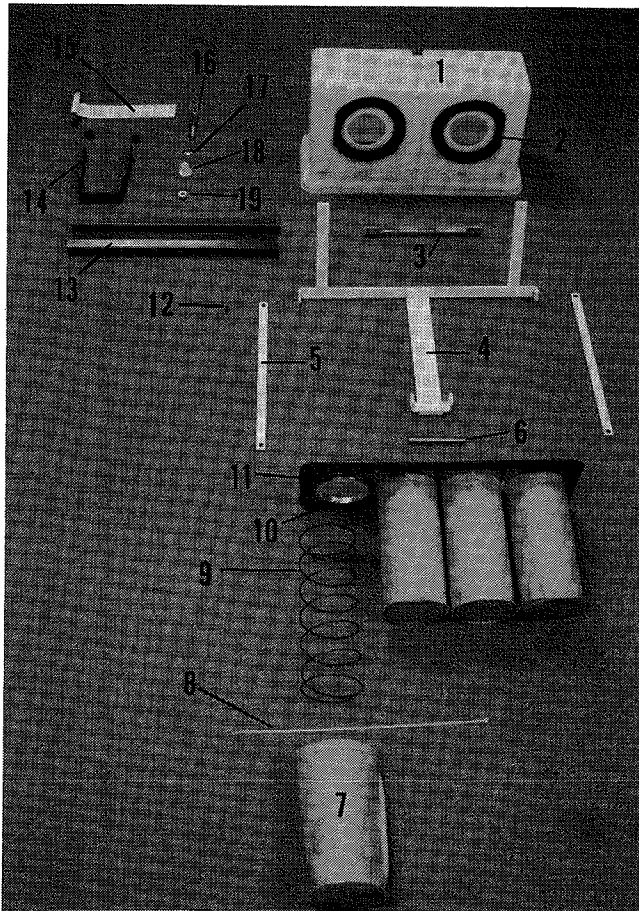
2. Lower the motor by rotating the two adjuster bolts, counterclockwise *an equal number of turns*.

IMPORTANT! Rotate the two adjuster bolts an equal number of turns to keep the motor shaft level. Failure to keep the motor shaft level can cause premature belt wear and noisy operation.

3. Inspect the drive belt for wear before reinstalling and replace it if necessary. Place the belt on the motor pulley, then stretch it onto the brush pulley.

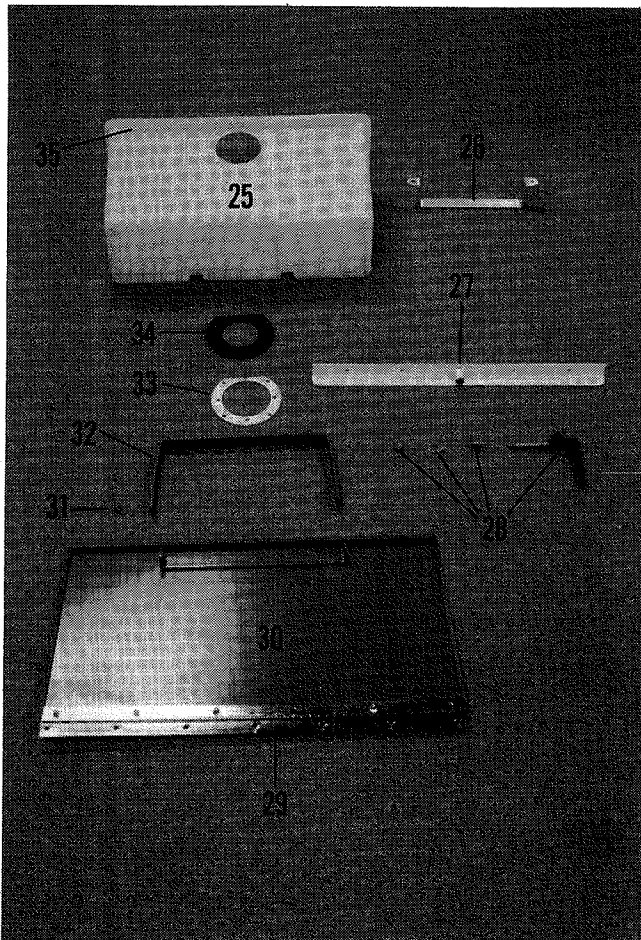
4. Tighten the belt if necessary. The belt should flex about 1/4" each way when properly tensioned. To tighten the belt, rotate the two adjuster bolts clockwise 1/4 turn each, then check belt tension. Repeat this until the belt flexes 1/4" each way.

Rotate the pulleys by hand and observe how the belt rides on the pulleys. It should not rub on either side of the pulleys. If it does, this means that the motor shaft is not level, and this will cause premature belt wear and noisy operation. Adjust this by rotating *only one* adjuster bolt, 1/4 turn each time until the belt rides in the middle of the motor pulley. Make certain that the belt does not become too tight or too loose while leveling the motor.



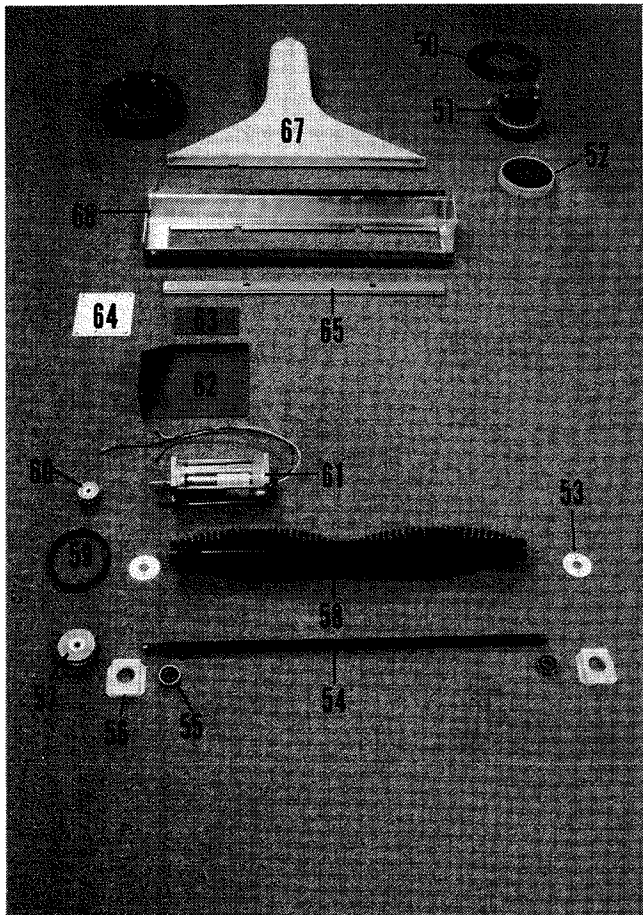
VACUUM CHAMBER PARTS LIST

ITEM #	DESCRIPTION	PART #	QTY.
1.	HOUSING, FILTER	100783	1
2.	GASKET, VACUUM	100001	2
3.	ANGLE PLATE, FILTER	230591	2
4.	BRACKET, PIVOT ASSY.	230592	1
5.	LINK, HOPPER	230573	2
6.	SHAFT, PIVOT BRACKET	230597	1
7.	FILTER TUBE	900106	4
8.	WIRE TIE, 17 1/2" X .190	130644	4
9.	SPRING, FILTER TUBE	140420	4
10.	PLATE, FILTER	230593	1
11.	GASKET, FILTER PLATE (bottom side)	100134	1
	GASKET, FILTER PLATE (top side)	100147	1
12.	BUSHING, LINK	140912	4
13.	PLATE, SHAKER	250055	1
14.	HANDLE, SHAKER	230586	1
15.	BRACKET, SHAKER	230575	1
16.	PIN, GUIDE	230589	1
17.	NUT, CONDUIT LOCK 1/2"	140504	1
18.	BUSHING, GUIDE PIN	140909	1
19.	NUT, NYLON LOCK 3/8-16 S/S	140515	1



HOPPER ASSEMBLY PARTS LIST

ITEM #	DESCRIPTION	PART #	QTY.
NOTE: ITEM NUMBERS 20 THROUGH 24 OMITTED FOR FUTURE EXPANSION.			
25.	HOUSING, HOPPER	100782	1
26.	HANDLE, HOPPER	230568	1
27.	BRACKET, HOUSING	230584	1
28.	LATCH HANDLE, ASSY.	700002	1
29.	HINGE, REAR PANEL COVER	230585	1
30.	PANEL, REAR COVER	250059	1
31.	BUSHING, LINK	140912	2
32.	BRACKET, SUPPORT	250058	1
33.	RING, INLET TUBE	230576	1
34.	SEAL, INLET TUBE	100133	1
35.	BRACKET, HOPPER	230578	2

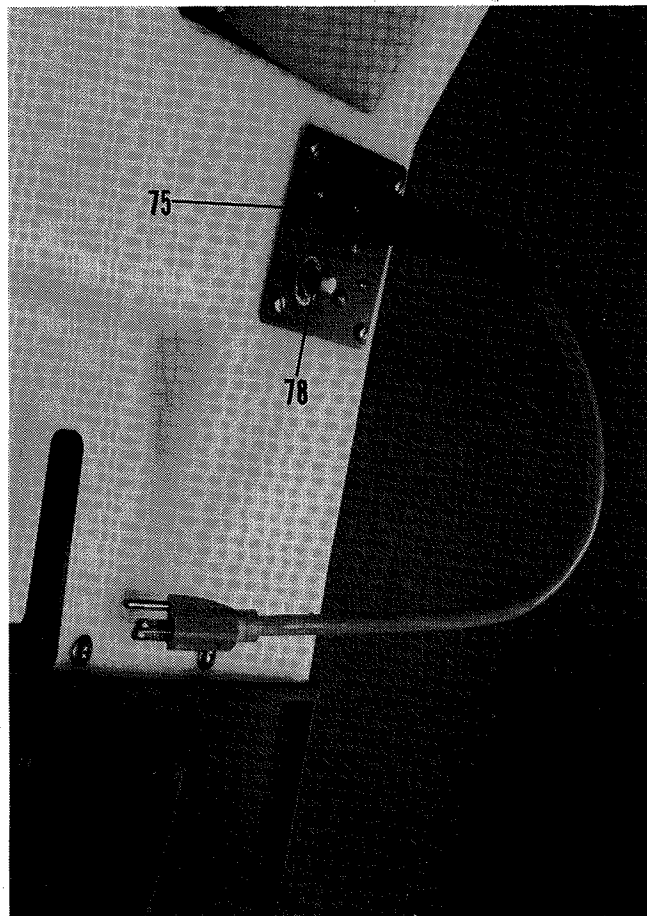


BRUSH ASSEMBLY PARTS LIST

ITEM #	DESCRIPTION	PART #	QTY.
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NOTE: ITEM NUMBERS 36 THROUGH 49 OMITTED FOR FUTURE EXPANSION.

50.	PLATE, VACUUM MOUNT	230572	2
51.	VACUUM MOTOR, 120V A.C.	130988	2
	VACUUM MOTOR, 24V D.C.	130995	2
	VACUUM MOTOR, 220V / 240V A.C.	130997	2
52.	FILTER, VACUUM MOTOR	180626	2
53.	GUARD, STRING	230570	2
54.	SHAFT, BRUSH	230567	1
55.	BEARING, BRUSH	140123	2
56.	BLOCK, BEARING	230551	2
57.	PULLEY, BRUSH	230580	1
58.	BRUSH, CYLINDER 30"	240065	1
59.	BELT, BRUSH DRIVE	230581	1
60.	PULLEY, MOTOR	230579	1
61.	MOTOR, BRUSH DRIVE 120V A.C.	130985	1
	MOTOR, BRUSH DRIVE 24V D.C.	130991	1
	MOTOR, BRUSH DRIVE 220V / 240V A.C.	130473	1
62.	BRACKET, MOTOR	230587	1
63.	PLATE, MOTOR LOCK	230577	1
64.	COVER, BELT	250057	1
65.	LIP, CARPET SHOE	230571	1
66.	SHOE, CARPET	230598	1
67.	HOUSING, VACUUM TUBE	100781	1

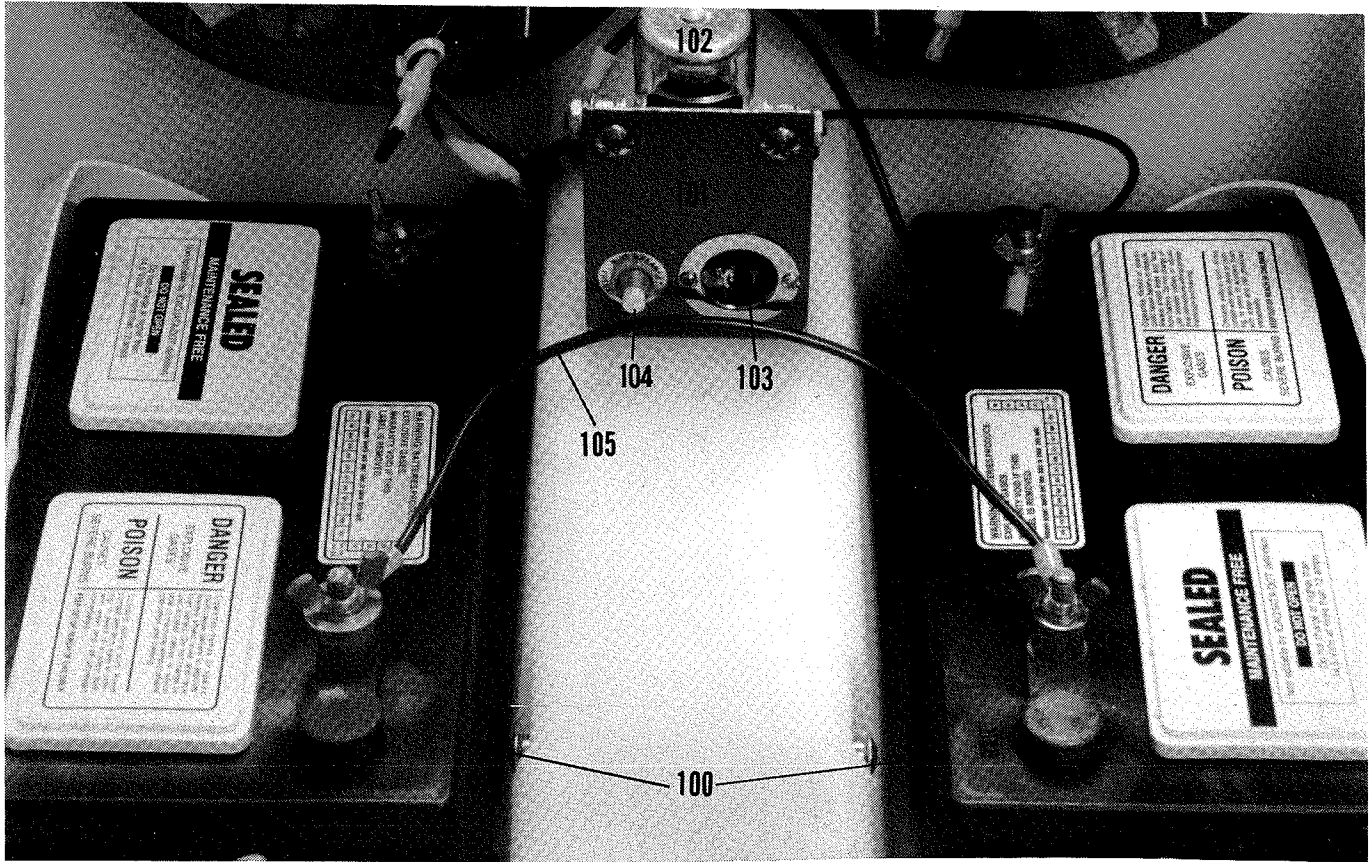


CORD MOUNT PLATE PARTS LIST

ITEM #	DESCRIPTION	PART #	QTY.
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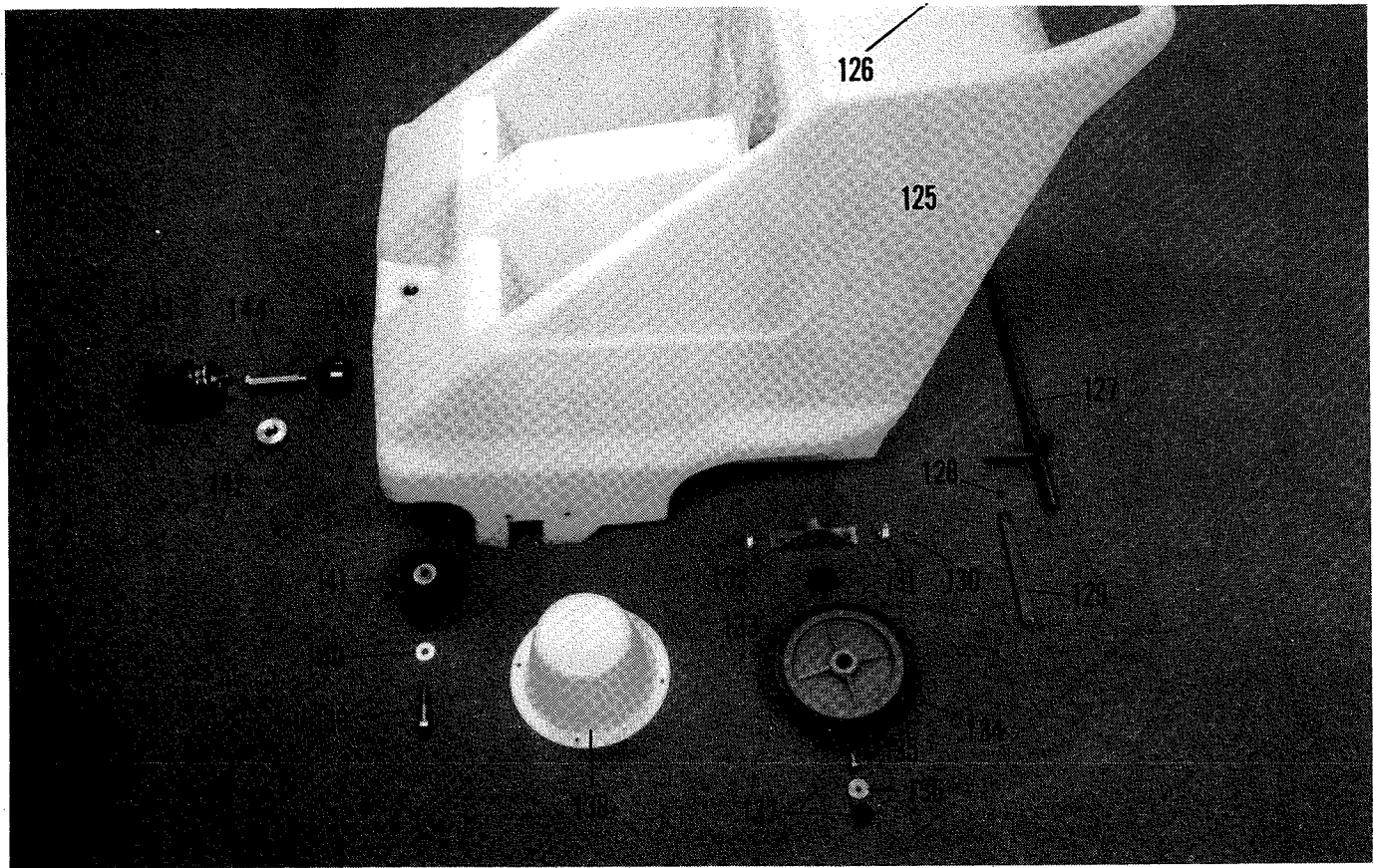
NOTE: ITEM NUMBERS 68 THROUGH 74 OMITTED FOR FUTURE EXPANSION.

75.	PLATE, CORD MOUNTING	250060	1
76.	CORD GRIP, LIQUID TIGHT 120V / 220V	130166	1
77.	CORD, 14/3 X 24" YELLOW W/PLUG	130227	1
	CORD, 3 X 2.5 QMM SQ. BLACK EURO	130226	77 FT
78.	BREAKER, CIRCUIT 2.5 AMP	130746	1
	CORD, 14/3 X 75', (not shown)	130229	1
	RECTIFIER, (not shown)	130304	1
	TERMINAL STRIP, 25 AMP, (not shown)	130006	1



BATTERY ASSEMBLY PARTS LIST

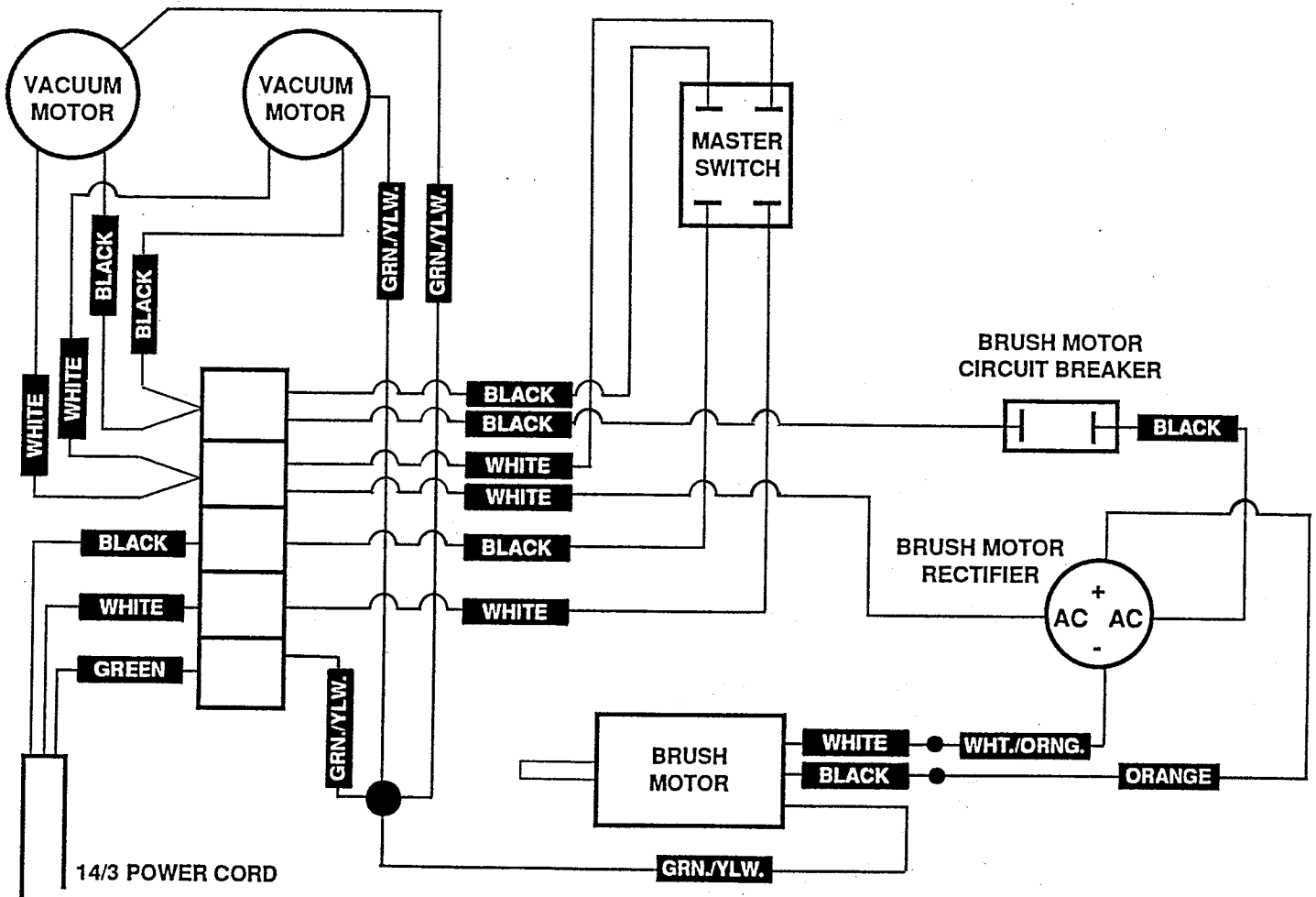
ITEM #	DESCRIPTION	PART #	QTY.	ITEM #	DESCRIPTION	PART #	QTY.
NOTE: ITEM NUMBERS 79 THROUGH 99 OMITTED FOR FUTURE EXPANSION.							
100.	BATTERY, 12 VOLT SEALED	130999	2	(not shown)	CHARGER W/PLUG, 120 V	130993	1
101.	BRACKET, SOLENOID	230600	1	(not shown)	CHARGER W/PLUG, 220 V	130994	1
102.	SOLENOID, 24 VOLT	130218	1	(not shown)	CHARGER W/PLUG, 240 V 50 HZ.	130992	1
103.	RECEPTACLE, TWIST LOCK	130615	1	(not shown)	PLUG, TWIST LOCK, (for charger)	130513	1
104.	CIRCUIT BREAKER, 10 AMP 24V D.C.	130737	1				
105.	WIRE ASSY. 10 GA X 13" BLACK	700938	1				



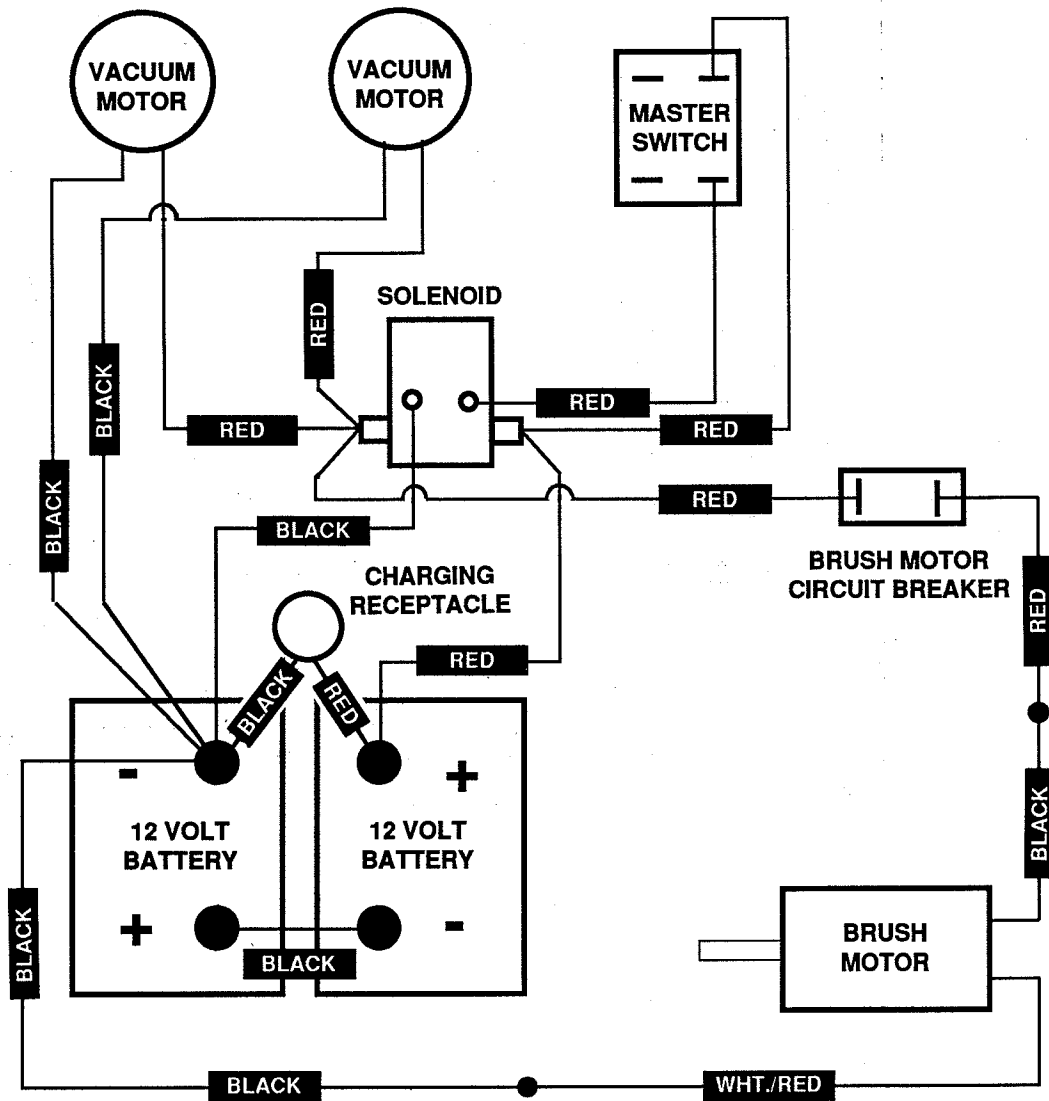
FINAL ASSEMBLY PARTS LIST

ITEM #	DESCRIPTION	PART #	QTY.	ITEM #	DESCRIPTION	PART #	QTY.
NOTE: ITEM NUMBERS 105 THROUGH 124 OMITTED FOR FUTURE EXPANSION.							
125.	HOUSING, MAIN	100780	1	138.	COVER, VACUUM MOTOR	250056	2
	COVER, HOOD, (NOT SHOWN)	100784	1		HEPA FILTER, (NOT SHOWN)	230601	2
126.	SWITCH, (120V A.C. & 24V D.C.)	130647	1	139.	SCREW, HEX HD.CAP 1/2-13 X 2 1/2 S/S	140234	2
127.	AXLE, ASSEMBLY (WELDMENT)	230594	1	140.	WASHER, FLAT 1/2 SAE S/S	140009	2
128.	BUSHING, LINK	140912	2	141.	WHEEL, BUMPER	103026	2
129.	LINK, HOPPER LIFT	230574	1	142.	NUT, LOCK	230565	1
130.	WASHER, LOCK 1/2" - S/S	140024	4	143.	CASTER, FRONT SWIVEL	103051	1
131.	SCREW, HEX HEAD CAP 1/2-13 X 1 S/S	140237	4	144.	STEM, CASTER	230583	1
132.	BRACKET, AXLE	230582	2	145.	KNOB, HANDLE LOCK	240202	1
133.	BEARING, FLANGE	140111	2		HINGED HOOD PARTS NOT SHOWN:		
134.	WHEEL, 8" REAR	103052	2		ROD, FOR HOOD	230684	1
	WASHER, FLAT .350 ID X 1.25 OD X .060	140055	2		NUT, LOCK NYLON INSERT 1/4" S/S	140501	1
	(not shown, fits between #134 & #136)				HINGE, FOR HOOD	230683	2
135.	SCREW, HEX HD. CAP 5/16-18 X 5/8 S/S	140226	2		SCREW, POLYFAST #10 X 5/8 PHP ZINC	140870	8
136.	WASHER, 5/16" FOR #150210	140048	2				
137.	PLUG, CAP BLACK	150210	2				

WIRING DIAGRAM FOR ELECTRIC MODELS MODEL NO. WV3000



WIRING DIAGRAM FOR BATTERY MODELS MODEL NO. BWV3000



MAX TRAC TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Max Trac Electric, (Model WV3000), will not run.	<ol style="list-style-type: none"> 1. Max Trac is not plugged into a power outlet. 2. Circuit breaker tripped in building. 3. Faulty Master Switch, #126. 4. Loose or broken wiring inside the Max Trac. 	<ol style="list-style-type: none"> 1. Plug into a <i>grounded</i> 110 volt A.C. electrical outlet. 2. Reset the circuit breaker at the panel. 3. Replace the switch. 4. Consult WIRING DIAGRAM on page 8 for wiring information. Repair any loose or broken wires. DO NOT USE MAX TRAC UNTIL THE WIRING IS REPAIRED!
Max Trac Battery, (Model BWV3000) will not run.	<ol style="list-style-type: none"> 1. Batteries are not charged. 2. Loose battery cable connections. 3. Faulty Master Switch, #126. 4. Loose or broken wiring inside the Max Trac. 5. Faulty solenoid, #102. 	<ol style="list-style-type: none"> 1. Charge the batteries as instructed in CHARGING INSTRUCTIONS on page 1. 2. Check cable connections at all four battery posts. See Figure 4 for proper battery connection. 3. Replace the Master Switch. 4. Consult WIRING DIAGRAM on page 9 for wiring information. Repair any loose or broken wires. DO NOT USE MAX TRAC UNTIL THE WIRING IS REPAIRED! 5. DISCONNECT THE BATTERIES. When batteries are disconnected, replace the solenoid, noting the mounting location of all wires attached to it.
Vacuum motors run but brush does not run.	<ol style="list-style-type: none"> 1. Brush motor circuit breaker, #79 on cord models, #104 on battery models tripped. 2. Broken or loose drive belt. 	<ol style="list-style-type: none"> 1. UNPLUG ELECTRIC MAX TRAC OR DISCONNECT THE BATTERIES ON BATTERY MODEL. Remove clogging material from the brush. Reset the circuit breaker, then reconnect power. 2. UNPLUG ELECTRIC MAX TRAC OR DISCONNECT THE BATTERIES ON BATTERY MODEL. Refer to REGULAR MAINTENANCE on page 3 for belt/brush servicing instructions.

MAX TRAC TROUBLE SHOOTING GUIDE, (Cont'd.)

PROBLEM	CAUSE	SOLUTION
Vacuum recovery is low.	1. Filter tubes are clogged.	1. See OPERATING THE MAX TRAC, step 3. If still clogged, clean out the tubes manually.
	2. The hopper is full.	2. See OPERATING THE MAX TRAC, step 4.
	3. Filter housing, #1 is not properly seated on the hopper, causing a vacuum leak.	3. See OPERATING THE MAX TRAC, step 4.
	4. One or both vacuum motors are not running properly.	4. Check wiring to the vacuum motors. Replace the vacuum motor if faulty.
Max Trac pushes hard.	1. The brush is too low.	1. Raise the brush using the brush height knob at the front of the Max Trac.

Castex® Warranty



LIFETIME

You can qualify for a lifetime warranty on all internal components with the Castex Added Protection Plan, C.A.P.P. When you use Castex chemicals, you receive C.A.P.P. coupons toward the purchase of Castex replacement parts. Call Castex for more information on C.A.P.P. You may never pay for a replacement part again!

10 Subject to the conditions stated below, Castex warrants the rotationally molded polyethylene and fiberglass housings, aluminum frames, and steel chassis for a period of 5 years on materials and workmanship. From the 5th to the 10th year, the warranty is prorated at 20% per year on materials and workmanship.

5 Subject to the conditions stated below, Castex warrants ALL components, materials and workmanship on the Cyclone Dryers for a full 5 years. The pump motor on the Magnum, Magnum DV and Magnum DVA is warranted for a period of 5 years on materials and workmanship.

1 Castex offers a full one year warranty on all other Castex components as outlined below.

Subject to the conditions and exceptions stated in this warranty, Castex Industries, Inc., warrants the Castex product to be free from defects in material and workmanship, under normal use and service, for one year to the original purchaser. At any time within one year from date of delivery to the original purchaser, the company will furnish for the Castex product a replacement part. Such replacement part will be furnished to the owner and charged, including transportation charges, through any authorized Castex distributor or F.O.B. the factory. If the part is returned for inspection by the factory and is found to be defective the owner will be credited for the part, labor (as specified in the Warranty Flat Rate Schedule) and normal transportation charges only. Parts replaced or repaired under warranty are fully guaranteed for the remainder of the original warranty period. Replacement parts that have become defective through wear or abuse are not included in this warranty. (See owner's manual to prevent abuse.) This warranty does not apply to damage caused by accident, misuse, negligence, abuse, fire, or to any Castex product which has been repaired by other than an authorized Castex distributor or factory personnel. Because this product is intended for commercial and/or industrial use, no warranty is extended to persons purchasing or using the equipment for personal, family, or household uses. This warranty is void if products are used for any purpose other than which was intended, and it is void if any cleaning compound other than Castex or Castex approved products are used. There are no other warranties expressed or implied, including any implied warranties of merchantability or fitness for a particular purpose.