POLISHER AES-100

SOLD TO

INSTALLED AT

MODEL# AES-100

SERIAL#

DATE MANUFACTURED

If you need further assistance, please call or write:

AUTEC, Inc.
2500 West Front Street
Statesville, North Carolina 28677
Toll Free 800-438-3028
Phone 704-871-9141
Fax 704-871-9101

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GENERAL SPECIFICATIONS

Structural Members	3"x 3" and 2"x 4" tubing
Hydraulic Reservoir	40 gallon capacity
Hydraulic Hose 3/8"-1/2”-3/4”	2250-1750-1250 PSI rated operating pressure
Hydraulic Pressure Setting	Factory set at 1000PSI
Hydraulic Motors-Drive	CharLynn 2000 series (2)
Hydraulic Motors-Brush	Parker Gear (5)
Hydraulic Safety Switch	Low-level and temperature sensing switches
Electric Motor	One 15hp, 3phase
Electrical Requirements	208/230 volts, 3 phase, 60 amps or 440 volts, 3phase, 30 amps
Air Pressure Requirement	Minimum of 100 PSI
Air Consumption	Maximum of 4 cubic ft. per min. at 75 PSI
Air Cylinder-Side Brush	2" bore x 10-3/4" stroke (4)
Air Cylinder-Top Brush	1-1/2” bore with a 60” stroke
Pneumatic Valve	Wabco
Pneumatic Regulator-Main	3/8" with filter and automatic drain system
Pneumatic Regulator-Side Brush	1/4" heavy duty (5)
Pneumatic Oil Lubricator	3/8" adjustable with clear bowl
Bearings	Heavy duty greasable
Wheels Idler and Drive	solid steel (4)
Control Unit	Siemens S7-200 Series PLC
Polishing Brushes	Non-woven polyester felt
Height of side polishing brushes	70” (80”above finished floor)
Width of top polishing brush	80”
Height of vehicle	Maximum of 84"
Track	Solid steel (6” wide X 1” tall)
Safety Listed	ETL & CETL

OPERATING INSTRUCTIONS

The polisher is intended to polish passenger cars and light trucks. Only trained personnel should operate the polisher. Read all instruction manuals prior to operating polisher.

PREPARATION

Park vehicle in center of polisher. Front tires should be against stop on floor. Turn engine off and place transmission in park and set emergency brake.

Make an inspection of the vehicle:

a. Vehicle must be clean, dry and free of all foreign materials

b. All windows and sunroofs should be closed

c. Antennas should be removed or retracted

d. Exposed windshield wipers should be removed

e. Loose chrome, moldings, mirrors or other equipment that projects from vehicle should be secured or removed

f. Large hood ornaments should be taped to prevent rough or sharp edges from catching on polisher cloth

g. Large mirrors on trucks and vans should be turned in or removed

h. Scratches and other blemishes should be polished manually

SPRAYING

WARNING: Failure to comply with instructions could result in personal injury and property damage.

WARNING: Wear gloves and eye protection. Prolonged use can cause irritation to skin and eyes.

WARNING: Wear respirator. Prolonged inhalation of polish/sealant vapors may cause nasal and respiratory irritation.

Spray 1-1/2 to 3 ounces of AUTEC polish/sealant to all painted and chrome surfaces evenly over the entire vehicle. Avoid spraying windows, vinyl covered tops and canvas tops. Use of too little chemical will result in poor shine while too much will cause streaking.

Return spray gun to holder on main frame of polisher when finished. Make sure hose is on outside of unit so it cannot catch on car as the polisher moves on the track.

CAUTION: Moving Equipment hazard!!

Machine motion during cycle includes travel along floor tracks between stop blocks with automatic direction reversal. Do not stand on or around machine travel area during machine operation or attempt machine adjustment and/or repairs unless you are aware of all programmed machine movements to avoid possible personal injury. Do not wear loose fitting clothes that may get entangled in brushes.

CONDITIONS PRIOR TO STARTING MACHINE

The AUTEC Soft Cloth Polisher is at rest with air pressure applied to the machine. Hydraulic pump is not running. All four side polishing brushes are retracted, and the top brush is retracted.

POLISHING

Turn POWER switch to ON position. The Side Brush, Top Brush and Top Brush Rotate switches are all in the left position.

Push the Start button on the panel. All side and top polishing brushes will start rotating and the polisher will start to move, traveling toward the rear of the vehicle. The four side polishing brushes and the top polishing brush will engage the vehicle. At the end of the track the polisher will pause for several seconds and reverse direction. All polishing brushes will turn in the opposite direction as the polisher travels toward the front of the vehicle. Polisher will pause several seconds and reverse direction again. All polishing brushes will turn in the opposite direction as the polisher travels toward the rear of the vehicle. The polisher will continue for sixty seconds and stop. The top polishing brush and all side polishing brushes will retract, and the polisher will stop.

During the cycle, the side polishing brushes can be retracted by placing the side brush switch in the retract position. The top polishing brush can be retracted by placing the top brush switch in the retract position. The top rotation can be stopped by placing the top brush rotate switch in the stop position and the top brush retract switch in the retract position. This will give the operator more control in unique situations such as luggage racks, ladders, convertible tops, etc., that cannot be polished.

The E-Stop button can be pressed at any time the polisher is in operation. All polishing brushes stop rotating and retract. To restart the polisher the E-Stop must be pulled out and the reset button pressed.

POST POLISHING

Use a clean terry cloth towel to wipe any spots missed, such as around molding, name plates, door locks or any other surfaces hidden from machine brushes.

Re-install antenna, windshield wiper blades, and any other accessory that was removed during preparation.

E-STOP

There is an emergency stop button on the control panel located on the rear driver's side panel. The emergency stop button can be pressed at any time during the cycle. The polisher will completely shut down and will not restart until the E-Stop button is reset and the reset button is pressed. After resetting the E-Stop the polisher can be started by pressing the start button.

OPERATOR CONTROL PANEL

The operator control panel consists of nine buttons or switches to control the operation of the polisher (see Dwg. No. 100-007-ME). The buttons/switches include:

POWER SWITCH

Turns power on to the machine. The switch must be in the ON position for the polisher to operate. The switch also has a green light integrated in it that will flash in conjunction with the fault light to identify fault conditions (see Fault Light). CAUTION: When the switch is in the STAND BY position, there is still power inside the control power panel. Disconnect all power to the machine before opening or servicing the control panel.

FAULT LIGHT

The fault light will light any time the machine has gone into a fault condition or if the E-Stop has been engaged. The fault light will flash a number of times followed by a flash of the start light to identify a given fault condition (see TROUBLE-SHOOTING).

START
The start button will activate the polisher anytime the Power switch is in the ON position and there are no machine faults.

RESET
The reset button will reset the machine after a machine fault provided the reason for the fault has been corrected.

CHANGE DIRECTION
The change direction button will reverse the machine direction of travel and the direction of rotation of both the top and side brushes.

TOP BRUSH ROTATE
The top brush rotate switch stops the rotation of and retracts the top brush (Note – The top brush will automatically retract anytime the top brush rotation switch has been turned off regardless of the position of the top brush retract switch.).

TOP BRUSH RETRACT
The top brush retract switch retracts the top brush (brush will remain rotating). (Note – The top brush will automatically retract anytime the top brush rotation switch has been turned off regardless of the position of the top brush retract switch.)

SIDE BRUSH RETRACT
The side brush retract switch will retract the side brush arms away from the vehicle (brushes will remain rotating).

E-STOP
The E-Stop switch disables all outputs from the PLC, disables the E-Stop input to the PLC, and activates the FAULT LIGHT. This will stop all brush rotation, stop gantry movement, and retract all brushes. The E-Stop switch must be reset (twist and pull out) and the machine reset (reset button pressed) before the machine can be restarted.

OPERATOR CONTROL STATION

MAINTENANCE

CAUTION: Maintenance should be performed by factory trained personnel only. Be sure to disconnect and lock out power prior to lubricating and inspecting washer.

Maintenance Mode

To put the Polisher into Maintenance Mode the "Power" switch must be switched to ***Power On*** mode. All other switches must be switched to the "***Off***" position, then the "***Start***", "***Reset***", and the "***Directional Switch***" buttons must be simultaneously pressed to enter into "Maintenance Mode".

Home at Exit: Once placed into Maintenance Mode the operator can program which end the Gantry will be parked at. Switching "***On***" then "***Off***" the "***Top Brush Retract"*** will park the Gantry at the entrance end, switching "***On***" then "***Off***" the "***Side Brush Retract***" will park the Gantry at the exit end.

Travel Timeout Disable: While in Maintenance mode, switching "***On***" then "***Off***" the "***Top Brush Rotate***" switch when no forward or reverse action is present will disable the Travel timeout alarm. This feature enables the Gantry to run forever in one direction if the Gantry is up on a cart for washing and cleaning of the brushes without a travel timeout occurring.

If the "***Start***" button is pressed, the Polisher will move to the end of the prox (based upon which End the Polisher was parked at) and then the other continually until the operator presses the "***Reset***" button.

Holding the reset button for more than 1 second takes it back out of Maintenance mode, resets the Travel Timeout disable, and puts it back into a normal operation mode. "Home at Exit/Entrance" will remain.

Lubrication Recommendations

Grease all bearings with Molylube No. 2 or equivalent waterproof grease. The importance of using the proper grease cannot be over-emphasized. (Some machines may be equipped with non-greaseable bearings in various areas. These bearings should be visually inspected on the same schedule as lubricating.)

Location	*Type of Bearing and Fitting*	*Frequency*
Side Brush	2 Brush shaft bearings with fittings on each bearing: Total of 8	Bi-Weekly
	2 Pivot shaft bearings with fittings on each bearing: Total of 8	Bi-Weekly
Top Polishing Brush	2 Pivot shaft bearings with fittings on each bearing: Total of 2	Bi-Weekly
	4 Brush linear bearings with fittings on each: Total 4	Bi-Weekly
Track Wheels	2 Idler wheels with 2 fittings per Idler wheel: Total 4	Bi-Weekly
	2 Drive Wheels with 2 fittings per Drive Wheel: Total 4	Bi-Weekly

REMOVE EXCESS GREASE TO PREVENT CONTAMINATION OF CLOTH!

1. Routine Inspection Should Be Performed at Time of Lubrication
2. There is no better way to prevent downtimes and avoid unnecessary repairs than to carefully inspect the Polisher regularly to discover potential problems at an early stage.
3. Check all hydraulic motors for signs of leakage, evident by moistness or presence of fresh oil around motor shaft or hose fittings.
4. Check all hydraulic hoses for loose mounting clamps, evident by clean or worn areas on sides of hoses.

5. Check tightness of hydraulic motor securing bolts.

6. Check tightness of shaft coupler connecting motor and polishing brush center shaft.

7. Check tightness of side brush bearing housing securing bolts.

8. Check tightness of bolts securing side polishing brush pivot bearing to frame.

9. Check all polishing brushes for loose securing bolts.

10. Check all four wheels for loose mounting bolts or misalignment.

11. Check tightness of drive wheel coupler.

12. Check air filter for presence of water and drain as required.

13. Check oil level in air system lubricator. Add marvel mystery oil (TM) or 10W non-detergent oil as required.

14. Check airlines for leaks.

15. Check inside side panels for hydraulic leaks.

16. Check oil level in hydraulic reservoir. Add Exxon Nuto H32 Hydraulic oil or equivalent as required.

17. Inspect proximity switch (stop and reverse). Recommended clearance 3/8".

18. Examine polishing cloth for foreign objects and remove as required.

OPERATIONAL INSPECTION

CAUTION: Moving Equipment hazard!!

Machine motion during cycle includes travel along floor tracks between stop blocks with automatic direction reversal. Do not enter bay during machine operation or attempt machine adjustment and/or repairs unless you are aware of all programmed machine movements to avoid possible personal injury. Wear no loose-fitting clothes that may get entangled in polishing brushes.

After completion of lubrication and routine inspections, the polisher should be operated by trained service personnel and the following operational checks made while Polisher is running.

a. Observe system air pressure (80 to 90 PSI). Adjust if necessary, by turning adjustment screw inward to increase or outward to decrease. System air pressure is controlled by the regulator portion of the filter-regulator-lubricator assembly mounted on the top of the air panel located in the side panel on the driver's side of the machine.

b. Observe hydraulic system pressure (1000PSI) FACTORY SET - DO NOT ADJUST.

c. Observe hydraulic fluid return pressure on gauge located on the hydraulic filter housing. Replace filter if pressure is above 18 psi. Replace filter after initial 50 hours of operation on a new installation and every 250 hours or annually thereafter (AUTEC p/n 91451).

d. Observe the following speeds: (All speeds are controlled by Hydraulic Flow Valves)

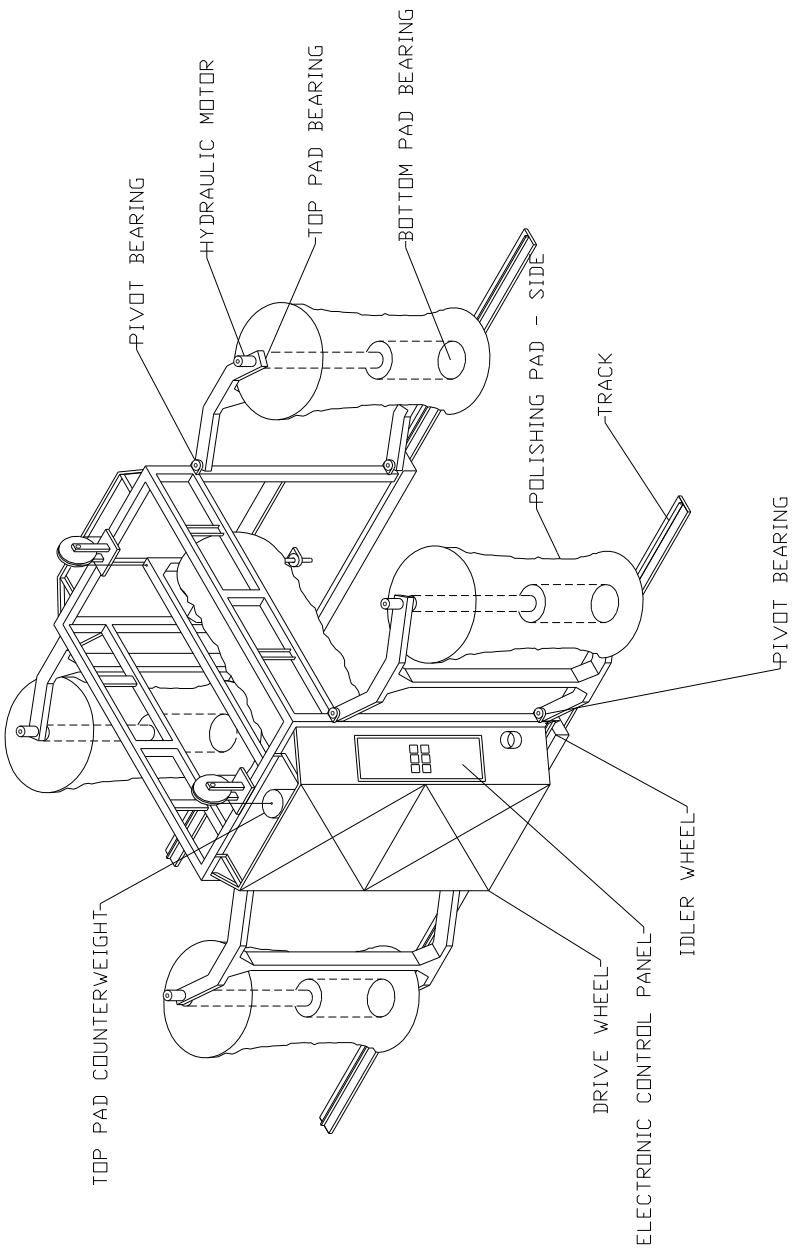
   1. The side polishing brushes should be turning at 75 RPM when polishing brushes are retracted.
   2. The top polishing brush should be turning at 125 to 140 RPM when retracted.
   3. The machine should travel end to end in 5 to 6 minutes.

e. Observe each side polishing brush engagement of vehicle side (2" to 8" engagement is acceptable). If engagement is excessive, reduce air pressure setting by turning adjustment knob out. To increase brush engagement, turn adjustment knob in to increase air pressure. Observe pressure change at gauge. When adjusting pressure downward, lower pressure below desired level, then adjust upward to desired setting. Make changes in pressure setting in 5 lb. increments.

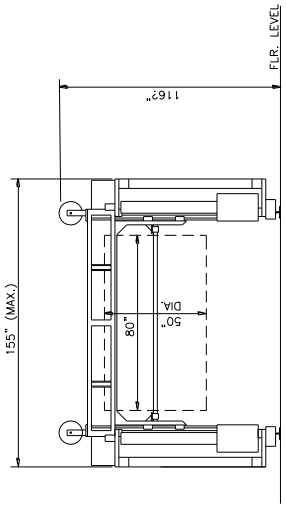
NOTE: During operation of the polisher, as the side polishing brushes swing around the front or rear of the vehicle they may stall out momentarily, especially on rubber covered bumpers. This is the result of the gentle action of the hydraulic system and is to be expected. Also note that the leading polishing brushes will apply lighter pressure against the vehicle while the trailing polishing brushes will apply more pressure and hug the vehicle tighter.

f. Observe the travel limit function at each end of the track.

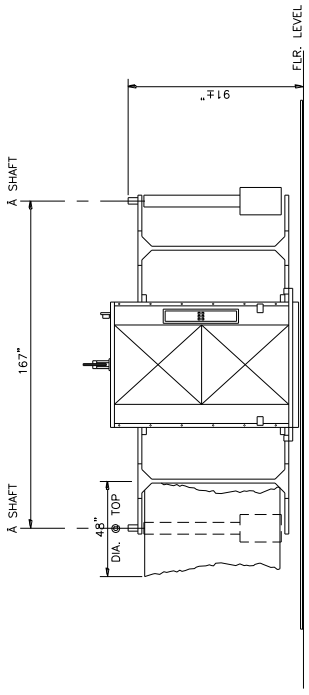
MACHINE DIAGRAM



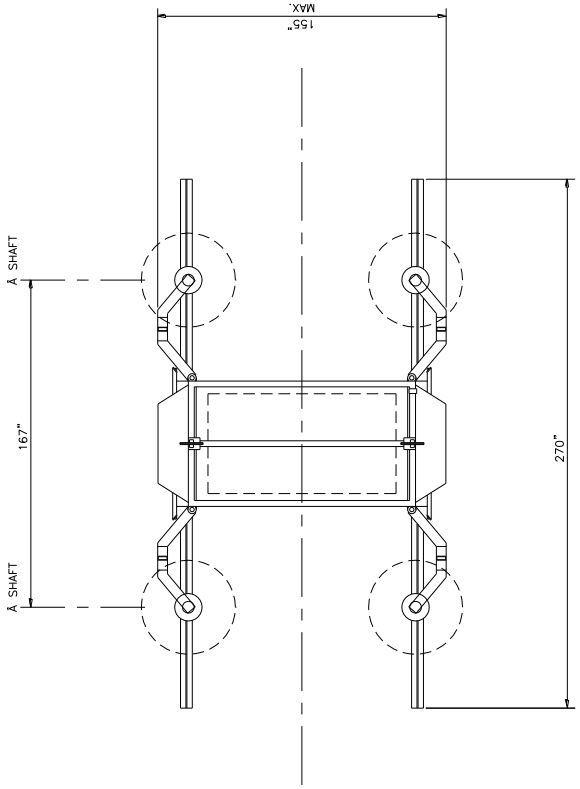
ELEVATION DRAWINGS



POLISHER END ELEVATION

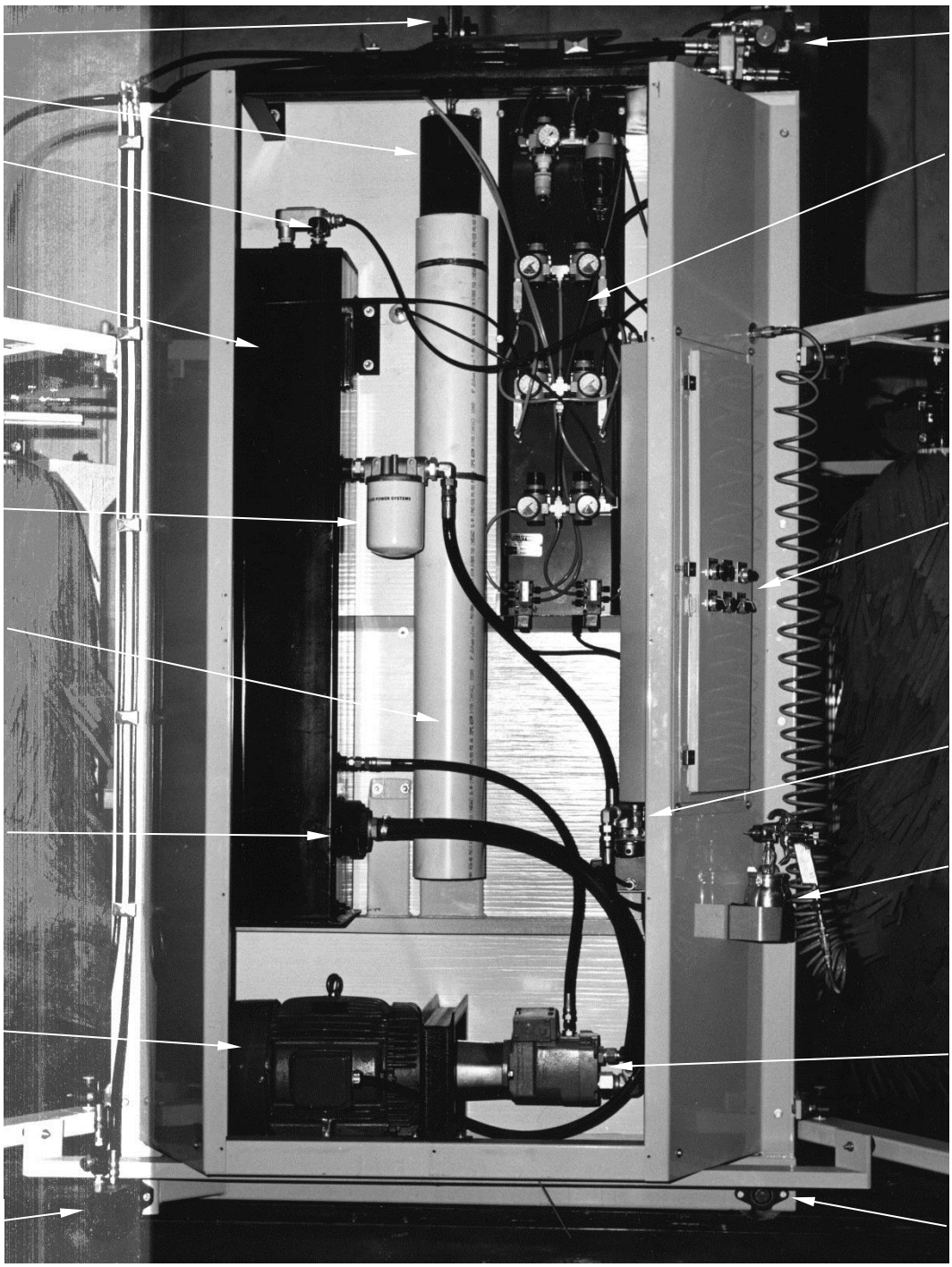


POLISHER SIDE ELEVATION

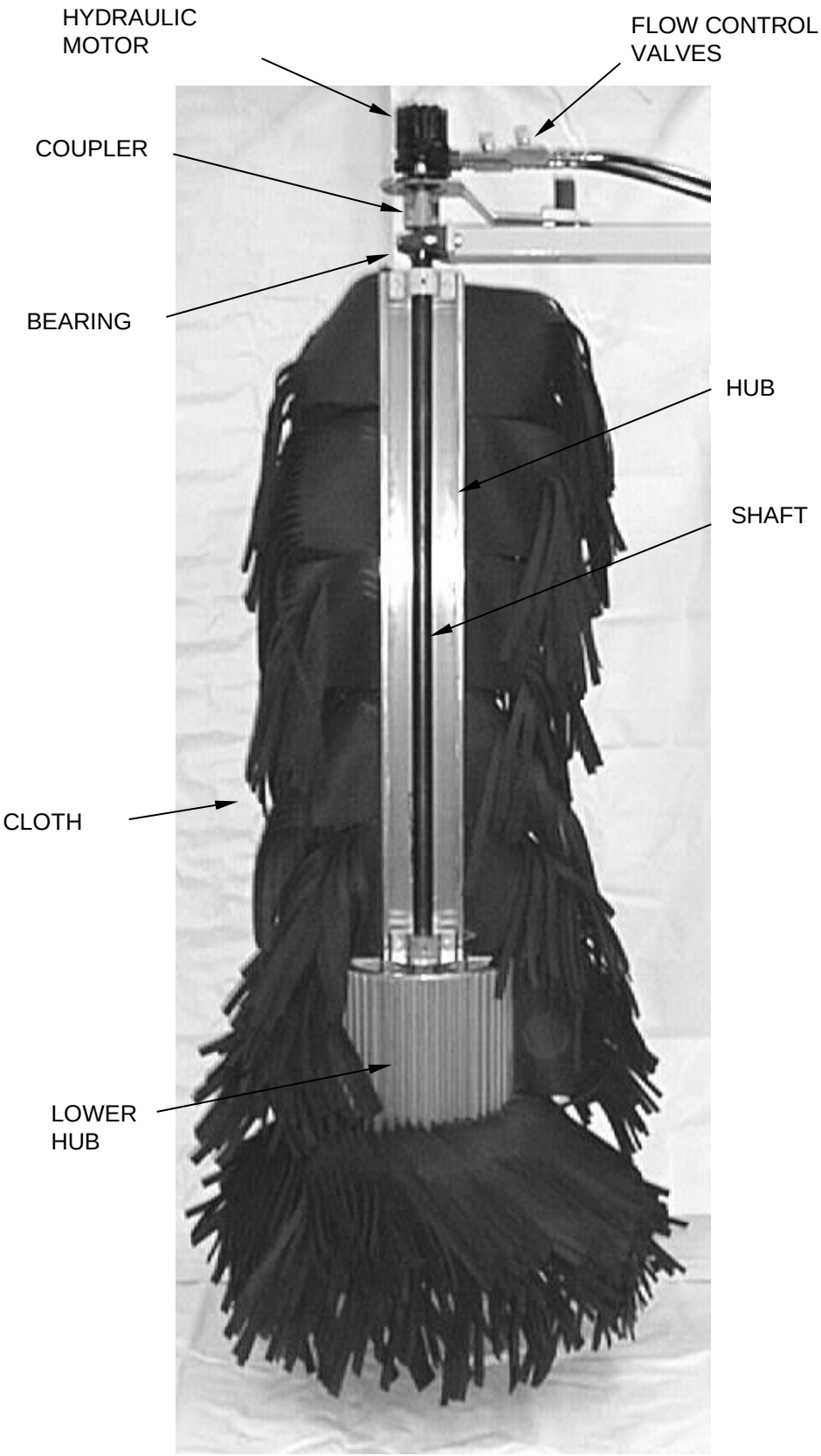


POLISHER PLAN

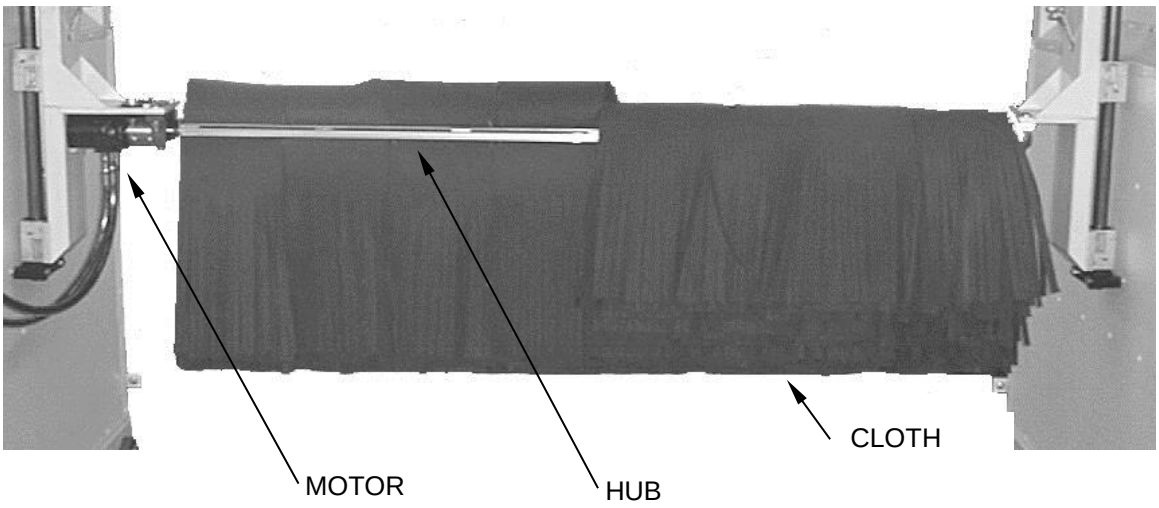
DRIVER'S SIDE ASSEMBLY

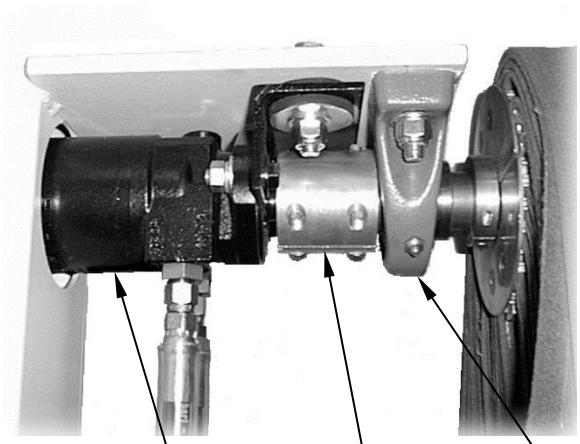


SIDE BRUSH ASSEMBLY

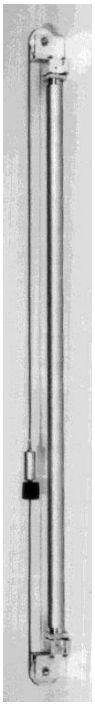


TOP BRUSH ASSEMBLY



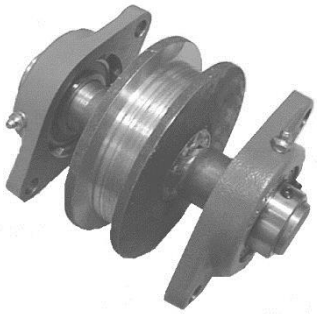


TOP BRUSH HYDRAULIC MOTOR

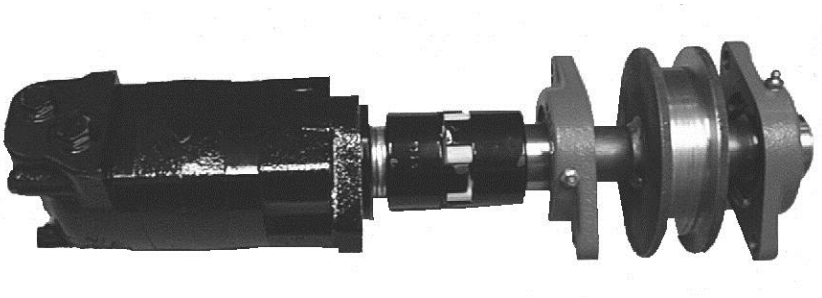


TOP BRUSH AIR CYLINDER

COMPONENTS



IDLER WHEEL ASSEMBLY

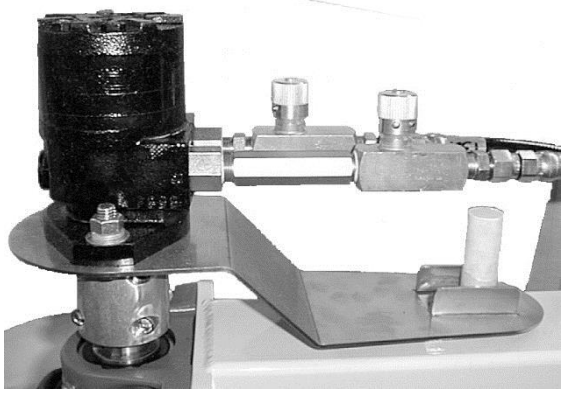


DRIVE WHEEL ASSEMBLY

MOTOR and HYDRAULIC PUMP

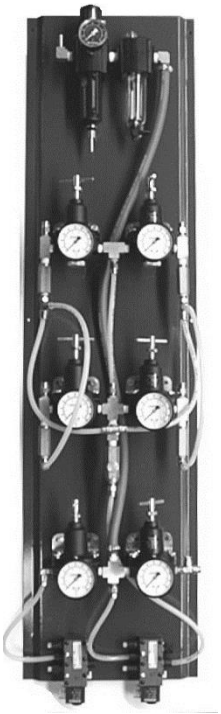
SPRAY GUN ASSEMBLY

CONTROL PANEL
SWITCHES

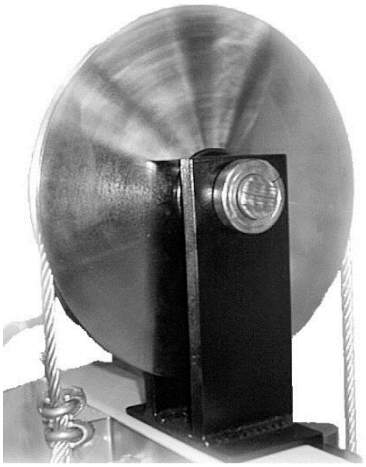


SIDE BRUSH MOTOR WITH
FLOW CONTROL VALVES

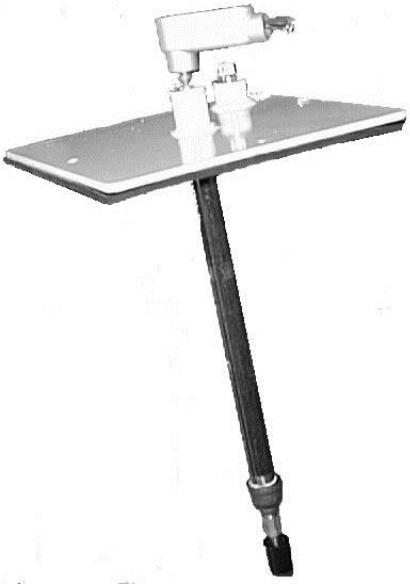
COMPONENTS 2



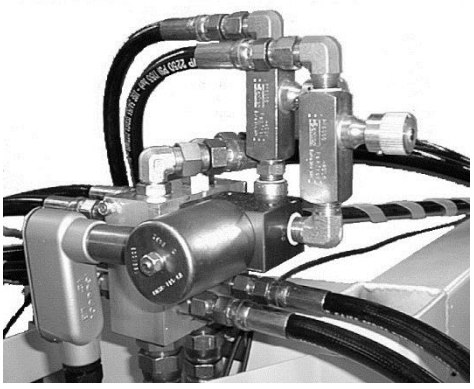
AIR PANEL



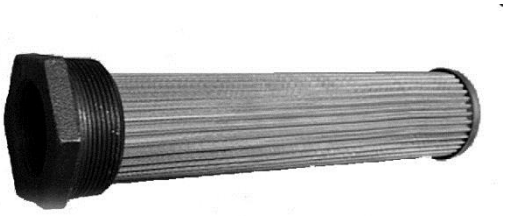
COUNTER WEIGHT PULLY



OIL LEVEL SWITCH

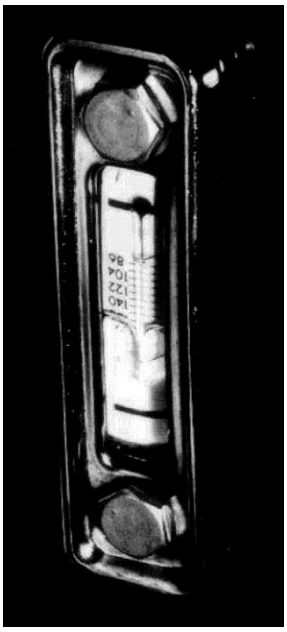


TOP BRUSH SHUTOFF VALVE



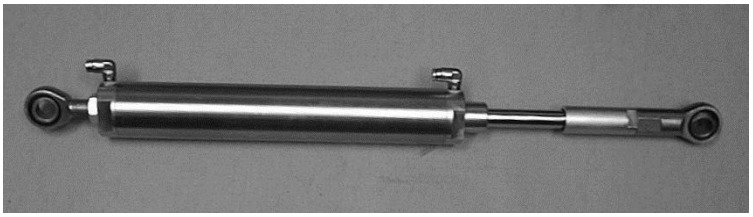
OIL STRAINER

COMPONENTS 3



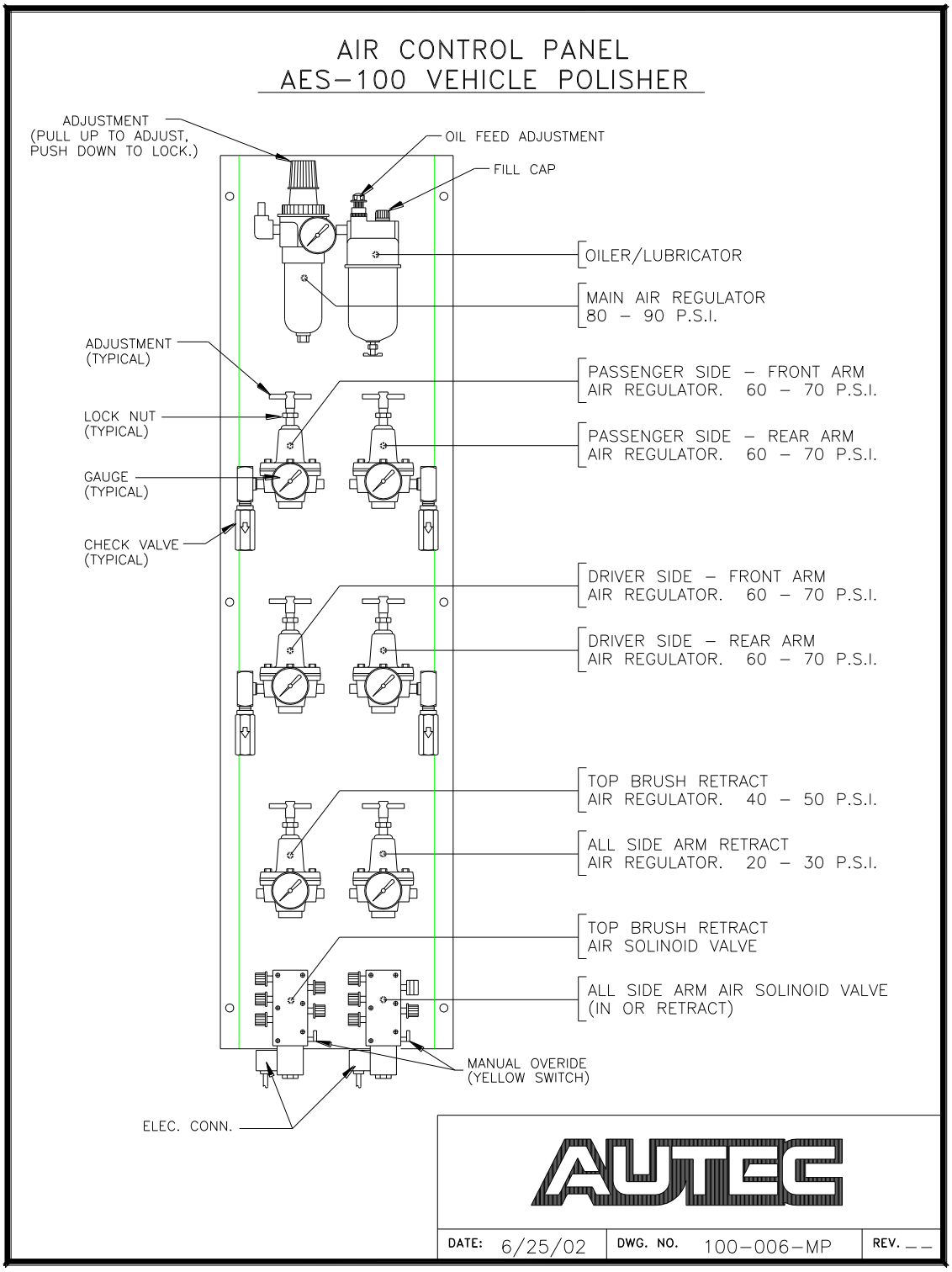
TEMPERATURE AND SIGHT GAUGE

MAIN HYDRAULIC VALVE

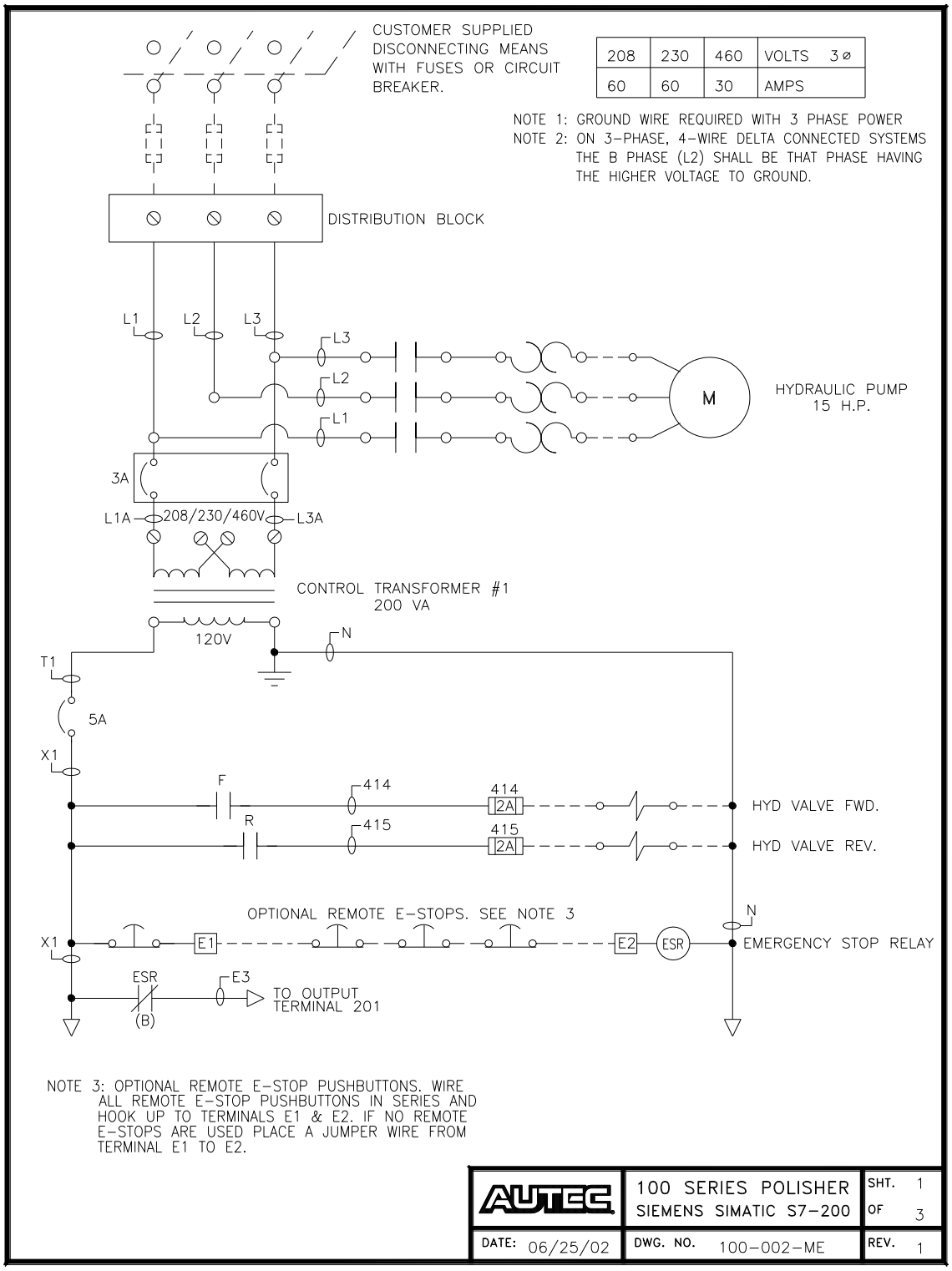


SIDE BRUSH AIR CYLINDER

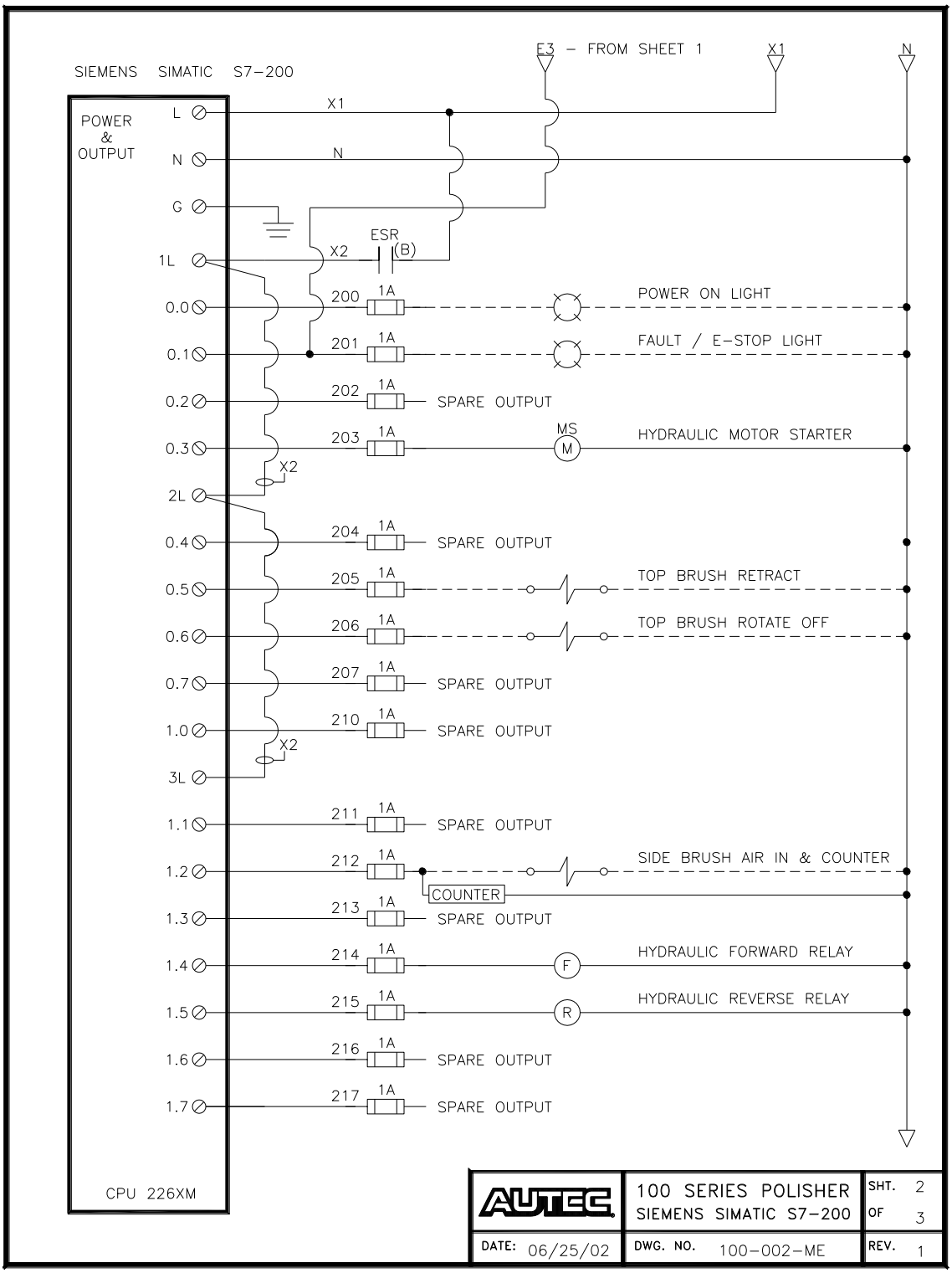
AIR CONTROL PANEL



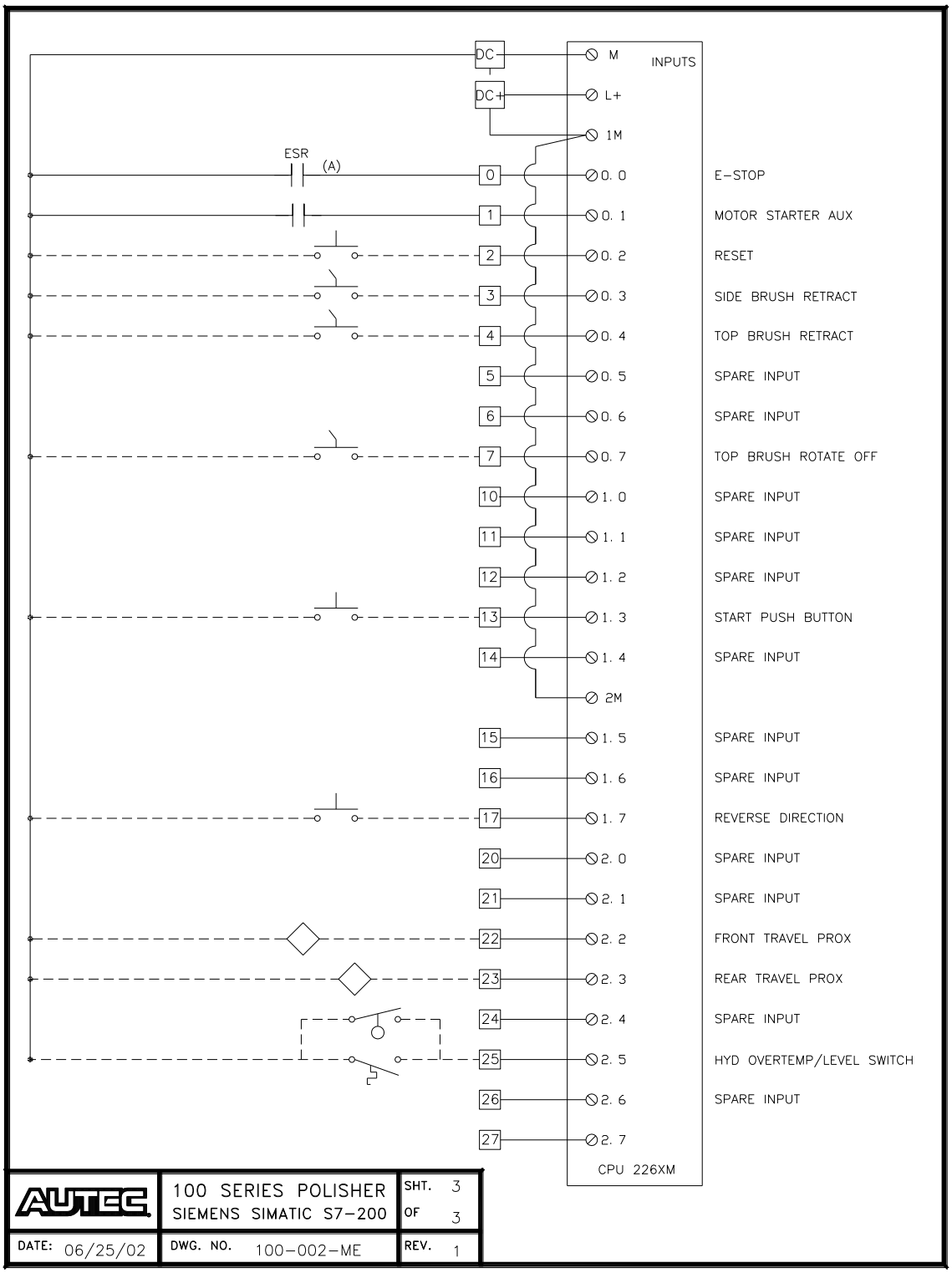
ELECTRICAL SCHEMATICS



Electrical Schematics - Outputs



Electrical Schematics - Inputs



Input Points

Terminal #	Input point	Use
00	0.0	E-Stop
01	0.1	Motor Starter Contact
02	0.2	Reset Switch
03	0.3	Side Brush Retract
04	0.4	Top Brush Retract
05	0.5	Not Used
06	0.6	Not Used
07	0.7	Top Brush Rotate OFF
10	1.0	Not Used
11	1.1	Not Used
12	1.2	Not Used
13	1.3	Start Push Button
14	1.4	Not Used
15	1.5	Not Used
16	1.6	Not Used
17	1.7	Reverse Direction
20	2.0	Not Used
21	2.1	Not Used
22	2.2	Front Travel Prox Switch
23	2.3	Rear Travel Prox Switch
24	2.4	Low Air Pressure Switch
25	2.5	Oil Temp / Level Switch
26	2.6	Tank Heater Thermal Switch
27	2.7	Not Used

Output Points

Terminal #	Output point	Use	Fuse
200	20.0	Power On Light	1
201	20.1	Fault / E-Stop	1
202	20.2	Not Used	1
203	20.3	Hyd Motor Starter	1
204	20.4	Hyd Heater Control	1
205	20.5	Top Brush Retract	1
206	20.6	Top Brush Rotate OFF	1
207	20.7	Not Used	1
210	21.0	Not Used	1
211	21.1	Not Used	1
212	21.2	Side Brush In Air Solenoid	1
213	21.3	Not Used	1
214	21.4	Forward Drive Hyd Valve	2
215	21.5	Reverse Drive Hyd Valve	2
216	21.6	Not Used	1
217	21.7	Not Used	1

INSTALLATION

EQUIPMENT SHOULD BE UNLOADED, SERVICED AND INSTALLED BY FACTORY TRAINED PERSONNEL ONLY

Unloading equipment

1. The customer supplies a 6000 lb. fork truck, with 7 ft. fork extension and 12 ft. high lift minimum.

2. Prior to unloading polisher, clear entire area of all vehicles and personnel.

3. Park truck on the most level grade accessible to job site. Make sure fork truck is on a level or slightly upgrade plane. Never try to unload polisher on a downgrade or sidegrade.

4. Center of gravity is off center toward the hydraulic pump side.

5. You will need at least 7-ft. forks on forklift. We provide fork extensions for this purpose. Pick polisher up by 4" main frame above top polishing brush. Polisher is heavier on driver's side because this is where the hydraulic tank is located. Place one fork directly against the side of the polisher on the driver's side and place the other fork to the right of center of the polisher. Pick polisher up slowly to insure your pickup position is correct.

6. As soon as polisher clears truck bed, lower to approximately 12" from grade. Set polisher on dollies close to or inside wash bay.

Mounting equipment

Refer to bay layout drawing # 100-005-MI for steps 7 through 21

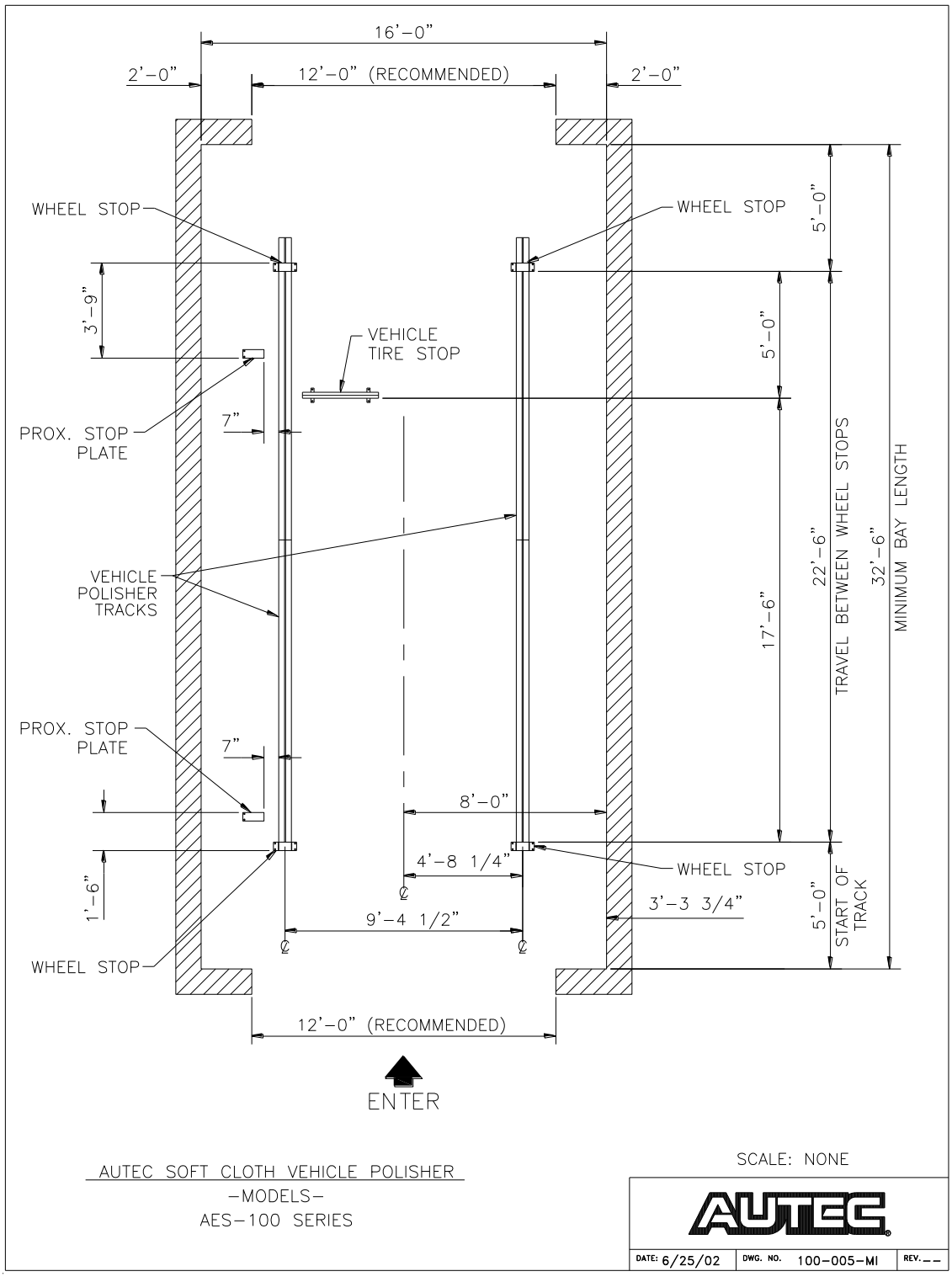
1. Measure door openings of bay. Mark the center point of each opening. Snap a chalk line from one end to the other.

2. Measure over 56-1/4” from centerline each way and make a mark. Do this on both ends of the bay and a couple of places in the center of bay. Snap a chalk line down these marks also, end to end. You should now have three chalk lines. The two lines that are furthermost apart should measure 112-1/2”. This is the center of the track rail.

3. Now you need to find the highest corner of the floor. We recommend using a line level and simply check diagonally from corner to corner. Once the high point has been established, you will need to place two sections of track down directly over the centerline that you marked, on the high end of the bay.

4. There are several reasons that will determine placement of track from either end of bay. We recommend 5’ min. from inside door opening.

BAY LAYOUT



5. Make sure track is in position and drill through mounting holes on both tracks. It is a good idea to place a couple of rods in the holes as you drill to keep the track from moving.

6. After all the holes on the two tracks have been drilled, use a 4’ level to find the highest place on the track. This is where you will start anchoring track.

7. Place 2 washers under track where first anchor bolt will be placed.

8. Work away from this high point using 4’ level and placing washers under track to level entire length.

9. After leveling and anchoring this track, use anchored track to level the track on same end of bay. It is critical that the two tracks are level with each other for the polisher to operate correctly. Drill and anchor this track as noted above.

10. You should now have the first two sections of track mounted.

11. Before mounting the next two sections of track, place the polisher on mounted tracks. Polisher is currently on dollies so it can be rolled up beside installed tracks. Make sure polisher is turned the correct way. Jack up one side of the polisher high enough to remove dollies and roll dollies out. Set this side of polisher down on track. Proceed with other side of polisher in same manner.

12. Now that polisher is on tracks, you can install the other two tracks. Do this in the same manner as the first two. Start drilling, anchoring and leveling where the two tracks butt together.

13. You should now install polisher drive wheel stops at each end of both tracks: four total. The stop bracket straddles the track and is anchored with four bolts per bracket. If track is shimmed over 1/2” you will also need to shim wheel stops.

14. Measure 5-ft back from the inside edge of the polisher drive wheel stop bracket, on the exit end. This is the center point of the angle iron wheel

stop. The angle iron wheel stop bracket should be mounted 2” away from the track.

15. The proximity switch actuator plates should be installed next. On the exit end, measure 45” from inside of wheel stop bracket to outside of prox plate. Plate should be 7” from edge of track to edge of prox plate. This will prevent anchor bolts from rubbing drive motor. Drill through prox plate and install anchor bolts in holes. Position polisher so drive motor is directly over prox plate. Measure the distance from bottom of motor to top of prox plate. Subtract 1/4” from this measurement. This is how far you need to space the prox plate from floor. The 1/4” is for clearance between drive motor and prox plate.

COMPRESSED AIR

The customer is to supply air service (min. of 3/8” dia. steel pipe) and a minimum of 100 psi. The air pipe should be mounted firmly to wall and the end of pipe should be 10’ off of floor and in the center of where the center of polisher will be.

ELECTRICAL

The main disconnect and 4” X 4” junction box should be installed and wired by licensed electricians only

GROUNDING INSTRUCTIONS: This appliance must be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the appliance.

The customer is to supply a 60 AMP, 3-phase disconnect mounted to local electrical code.

The customer is to supply a 4” X 4” X 4” deep junction box mounted 10’ above floor and in the center of where the center of polisher will be. This box needs to be mounted securely for it supports the weight of the electrical cord going to polisher.

The customer is to run three #6 phase conductors and one #6 ground conductor from disconnect to junction box.

FINAL CONNECTIONS

Make sure power is off and place safety lockout on disconnect before proceeding any further

Install strain relief on AUTEC supplied power cable (#6-4). Connect power cable and strain relief to 4”x 4” junction box previously mounted.

Connect AUTEC supplied 3/8” air hose to end of air supply pipe.

Move polisher to one end of the track. Take loose end of electrical power cable and slip it through cable clamp mounted on top of polisher above electrical panel. Pull cable tight and then pull 12” of cable back to allow some slack between polisher and 4”x 4” junction box. Temporarily secure cable to polisher. Now push polisher to opposite end of bay to insure cable is long enough not to be pulled tight when polisher reaches end of track. If cable is too tight, loosen the clamp and lengthen cable distance as required. After this has been accomplished repeat procedure for air hose.

Now that you are sure cable and hoses are of the proper length you can tighten the electrical cable clamp and secure the air hose to the electrical cable.

Take the electrical cable and run it through the watertight connector on top of the electrical panel. The three phase conductors will connect to the top of the terminal strip marked L1, L2 and L3 and the ground wire will connect to the ground terminal. There are no other electrical connections needed.

Connect the air hose by sliding the hose over the hose barb and secure with hose clamp.

POLISHER IS NOW READY TO RUN

Troubleshooting

DANGER / WARNING – Attempting to test electrical components by means of a jumper wire or, in some cases, a test meter, can be hazardous. It is strongly recommended that these procedures be performed by factory trained technicians or licensed electricians only. AUTEC does not encourage the testing of equipment by anyone other than the above-mentioned personnel.

1. Main Breaker / Overload / Primary Fuses / breakers
    a. Power, OK and Run lights on PLC?
        i. Check main 3-phase breaker and disconnect
        ii. Check 3 amp & 5 amp breakers in panel
        iii. Check reset button on overload relay, main panel
2. Output Fuses
    a. Individual glass fuses for each output (mdl 1 - mdl 2)

3. No Power Outputs (Hydraulic / Air Solenoid Valves, Etc.)
    a. Check PLC output light
    b. Check neutral wire to output device
    c. Check inputs for signals (prox switches, control switches, etc.)
    d. Check ESR relay

4. Power to Outputs But No Operation (Hydraulic / Air Solenoid Valves, Etc.)
    a. Check source of fluid / air, etc. (valves, pumps, compressor, etc.)
    b. Is hydraulic motor running backward? Check pressure gauge

5. Hydraulics not working, 15 H.P. motor humming
    a. Motor single phasing (call electrician)

6. Machine Won't Move
    a. Mechanical
        i. Machine off track?
        ii. Concrete anchors too high?
        iii. Worn out couplings / wheels?
        iv. Trash / cans under proximity switches? On track?
        v. Proximity switches faulty?
        vi. Track grooved from spinning wheels? (See i. - iv. For cause)
        vii. Flow control valves turned off?

7. Machine not stopping at end of track

a. Proximity switch under machine not sensing prox plate on floor
b. Proximity switch under machine defective
c. Broken wire between proximity switch and PLC

8. Machine won't leave end of track, or only travels short distance
    a. Check for trash under proximity switches
    b. Check for faulty proximity switch
    c. Check for dual proximity switch inputs in On Board PLC (input #22 & 23)

9. Machine Stopping Prematurely
    a. Fault Indications (see #12)

10. Machine or Brush Movements Opposite Of Output Signal
    a. 4-Way hyd. valve piston jammed at one end of valve
    b. Reversed wiring between PLC and valve

11. Continuous Hydraulic/Air/Lights
    a. Electrical (shorted wires, shorted contacts in output card)
    b. Mechanical (trash in solenoid diaphragm or seat, split diaphragm)

12. Fault Conditions
    a. Solid Fault Light – E-Stop Fault
        i. Reset E-Stop
        ii. Push Reset Button
    b. One Stop Light flash, one Enter Light flash – Low Air Pressure
        i. Check Air Compressor / Hoses
        ii. Restore Air Pressure
        iii. Push Reset Button
    c. Two Stop Light flashes, one Enter Light flash – High Oil Temp. or Low Oil Level
        i. High Oil Temp
            1. Let machine cool down
            2. Push Reset Button after machine cool down
        ii. Low Oil Level
            1. Check for leaks
            2. Replenish Hydraulic Fluid
            3. Push Reset Button
    d. Three Stop Light flashes, one Enter Light flash – Overload Relay on Main Starter.
        i. Reset overload relay
        ii. Check for cause of fault
        iii. Push Reset Button
        iv. Push Reset Button

v. Check motor starter for tripped overload
vi. Check breaker

13. Side Brush Arms Won't Go In or Out as Required
    a. Cylinders
        i. Leaking seals
        ii. Bent rods
        iii. Worn out bearings
    b. Air Pressure
        i. Check retract pressure at gauge
        ii. Check extend pressure at gauges
        iii. Check solenoids and outputs from PLC
    c. Solenoid muffler (adjust as necessary)
    d. Balance arms as necessary

14. PLC Problems
    a. Power, OK, and Run lights?
    b. Inputs
        i. Lights coming on for proper inputs?
        ii. Neutral wires connected?
    c. Outputs
        i. Output lights on?
        ii. Swap output cards and test
    d. PLC
        i. Program present? (Check w/ Hand Held Programmer)
        ii. Run light on?

Timers and other registers appear to be correct?

EMERGENCY STOPS:

The polisher is equipped with an emergency stop button mounted on the control panel located on the rear driver's side of the machine. If at any time the E-stop is depressed, the polisher will stop all operations immediately and cannot be restarted without first resetting system. Once the condition that necessitated the emergency stop has been corrected the polisher can be reset. To reset the polisher the E-stop must be reset (pulled out) first and the reset button on main control panel must be depressed. The cycle that was in progress when the E-Stop was depressed will be lost.

The polisher is equipped with two emergency systems related to the hydraulic system.

High temperature

If the hydraulic temperature exceeds 170˚ F, the polisher will shut down and cannot be operated until temperature drops below 170 degrees and system is reset.

Low level.

If the system loses approximately 5 gallons or more of hydraulic fluid for any reason the polisher will shut down and cannot be operated until fluid is replenished and system is reset.

During normal operation no one should be allowed in the bay area.

a. A crushing hazard is present if feet or hands are on track when polisher is in operation.

b. A crushing hazard exists between the brush arms and the brush arm stops.

There is a danger of loose clothing getting entangled in rotating brushes. Make sure shirttails are tucked in when working around polisher.

All service should be performed by factory trained technicians.

WARNING

EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to malfunction resulting in serious injury to persons and or property.

CAUTION: Risk of Electric Shock. This appliance has more than one connection to the source of supply. Disconnect all such connections before servicing.

- This equipment should be serviced, adjusted and repaired by trained personnel only
- Read all instruction manuals, tags and labels before operating equipment
- Use equipment only for its intended purpose. If you are not sure, call AUTEC at 800-438-3028
- Do not alter or modify this equipment
- Check equipment daily. Repair or replace damaged or worn parts immediately.
- Use only recommended fluids and chemicals or equivalent. Read all fluid and chemical manufacturer's warnings
- Comply with all applicable local, state and national fire, electrical and safety regulations