



**COMPARISON ELECTRO-MECHANICAL TO ELECTRO-HYDRAULIC VEHICLE BARRIERS
YEARLY MAINTENANCE**

RSS-2000 ELECTRIC WEDGE BARRIER				DELTA SCIENTIFIC HYDRAULIC BARRIER		
PREVENTIVE MAINTENANCE CONDUCTED ONCE A QUARTER	MATERIAL COST	TIME FOR TASK (Minutes)	LABOR COSTS	YEARLY	MATERIAL COST	LABOR COST
(1) Check operation of unit. Operate 10 to 12 times.	\$0.00	2	\$2.82	(1) DRAIN THE OIL FROM THE RESERVOIR AND FLUSH WITH	\$280.00	\$212.50
(2) Remove Access Plates.	\$0.00	30	\$42.30	MINERAL SPIRITS OR CLEAN OIL. AFTER WIPING DOWN THE		
(3) Check Actuator brackets.	\$0.00	5	\$7.05	TANK SIDES AND BOTTOM TO ASSURE THAT NO		
(4) Check Actuator seals/nuts.	\$0.00	2	\$2.82	CONTAMINATION REMAINS, REPLACE WITH FILTERED OIL.		
(5) Check Chain Bolts.	\$0.00	2	\$2.82	(2) REMOVE BARRIER TOP PLATES, CHECK THAT THE	\$50.00	\$340.00
(6) Check reflectors and strobe light.	\$0.00	2	\$2.82	HYDRAULIC CYLINDERS ARE NOT LEAKING INTERNALLY		
(7) Check Split Journal Bearing Bolts.	\$0.00	5	\$7.05	(SEE HYDRAULIC TROUBLESHOOTING SECTION FOR DETAILS.)		
(8) Check and Grease Split journal Bearings.	\$3.00	10	\$14.10	REPLACE CYLINDER SEALS OR CYLINDER AS NECESSARY.		
(9) Check all painted parts and touch up as needed.	\$9.00	30	\$42.30	(3) CHECK CYLINDER CLEVIS PINS FOR WEAR, REPLACE AS	\$85.00	\$85.00
(10) Check non-skid coating and touch up as needed.	\$9.00	30	\$42.30	NECESSARY.		
(11) Check sump pump and drainage ports. Make sure drain ports and/or sump pump are clear of debris and sump pump operates properly.	\$0.00	5	\$7.05	(4) EXAMINE THE FOUNDATION FRAME FOR DEBRIS BUILDUP, CHECK DRAIN LINES AND SUMP WELLS FOR DRAINAGE. CLEAN DEBRIS.		\$42.50
(12) Check the unit interior for dirt and debris. Remove as necessary.	\$0.00	15	\$21.15	(5) TIGHTEN OR REPLACE ANY LOOSE TOP PLATE BOLTS. DRILL AND TAP TO NEXT SIZE OR USE INSERTS IF THREADS ARE STRIPPED.	\$45.00	\$63.75
(13) Reinstall the Access Cover Plates and bolts	\$0.00	30	\$42.30	(6) CHECK CONDITION OF THE BARRIER PAINT SURFACE. PREPARE, PRIME AND TOUCH UP AREAS WHERE THE PAINT CHIPPED OR WORN AWAY. APPLY NEW REFLECTIVE TAPE AS NECESSARY.	\$144.00	\$63.75
(14) Complete Maintenance Checklist	\$0.00	10	\$14.10	(7) CHECK HYDRAULIC INTERCONNECT LINES FOR KINKS, CONTACT WEAR OR BULGING. REPLACE OR PROTECT HOSES AS REQUIRED.	\$25.00	
1st Quarter Preventive Maintenance Costs	\$21.00	178	\$250.98	(8) THOROUGHLY CLEAN THE HPU, REMOVING DUST AND SPILL OIL. REMOVE ANY RUST BUILD UP ON COMPONENTS. TOUCH UP PAINT WHERE NECESSARY.	\$0.00	\$106.25
2nd Quarter Preventive Maintenance Costs	\$21.00	178	\$250.98	(9) CHECK THE ACCUMULATOR PRESSURE WHILE THE SYSTEM IS AT ZERO PRESSURE USING DELTA CHARGING KIT A02469-31 OR EQUAL. IF TOOL IS NOT AVAILABLE, OBSERVE THE VALUE THAT THE PRESSURE GAGE JUMPS TO WHEN POWER IS AGAIN TURNED ON. (SEE HYDRAULIC SECTION FOR DETAILS.) LOG VALUE AND PRESSURE SETTING ON LOG SHEET PROVIDED		
3rd Quarter Preventive Maintenance Costs	\$21.00	178	\$250.98	(10) TEST MOTOR STARTER OVERLOADS BY PRESSING THE TEST BUTTON. REPLACE IF NECESSARY OR PRESS RESET. AUTO/MANUAL SWITCH SHOULD BE IN MANUAL POSITION.	\$0.00	\$21.25
4th Quarter Preventive Maintenance Costs	\$21.00	178	\$250.98	(11) CHECK THE PRESSURE RELIEF VALUE OF 2200 PSIG (152 BAR). ADJUST AS NECESSARY.	\$0.00	\$42.50
Maintenance is performed once each quarter.						
Total	\$84.00	712	\$1,003.92	Total	\$724.00	\$1,147.50
Total yearly service	\$1,087.92			Total Yearly Service		\$1,871.50
Total monthly service for the year	\$0.00		0	Total monthly service for the year		\$5,442.00
Total first week service	\$0.00		0	Total first week service		\$432.50
Total service cost with no major repairs	\$1,087.92			Total service cost with no major repairs		\$7,746.00

Labor Costs based On \$85.00 an hour; Material Costs based on information received from service companies that routinely do barrier servicing