

Servicing schedule for automatic entrance system

Preventive Maintenance Programme

Safety check: Safety critical items numbered 95 – 106 to be checked monthly by client.

Service intervals: Every twelve months or every 2,500 cycles (full operation open and close = 1 cycle)

Preparation and Cleansing

- | | Pass |
|--|--------------------------|
| 1 Sweep equipment external surfaces with a soft bristle hand brush and wipe motors. | <input type="checkbox"/> |
| 2 Visually inspect all systems and report any significant damage or deterioration to equipment or decorative finish. | <input type="checkbox"/> |

General

- | | |
|---|--------------------------|
| 3 Inspect installation generally and check squareness and levels. Report any variations. | <input type="checkbox"/> |
| 4 Run motor(s) and check operation of each item of installed equipment for evident visible or audible contra-indications. | <input type="checkbox"/> |
| 5 Inspect and sweep out any debris from motor pits and rail gullies. Report any flooding or excessive build-up of debris to client. | <input type="checkbox"/> |
| 6 Clean and lubricate hinge bearings, locks, drive systems and control gear. | <input type="checkbox"/> |
| 7 Check mechanical clearances and running tolerances. Note any excessive or unusual wear patterns. | <input type="checkbox"/> |
| 8 Check physical stops at each end of travel of gates/barrier arms. Report any signs of damage or over-run. | <input type="checkbox"/> |
| 9 Carry out visual check of underground loop chases for erosion of sealer. | <input type="checkbox"/> |
| 10 If sealer is damaged, carry out electrical conductivity and leakage tests on underground loops – megameter impedance better than 1.0 MgOhm dry or 0.5 MgOhms damp – (after consultation with client if not covered by warranty). | <input type="checkbox"/> |
| 11 Upgrade processor firmware to approved version of safety software to meet current safety standards (if applicable). | <input type="checkbox"/> |
| 12 Inspect and test fixtures and fittings and electrical equipment for visible deterioration. Replace or repair cables as necessary (after consultation with client if not covered by warranty). | <input type="checkbox"/> |

Pedestrian gate (*as applicable*)

- | | |
|---|--------------------------|
| 13 Visually inspect and test electric lock mechanism. Clean and lubricate shoot/release bolt. | <input type="checkbox"/> |
| 14 Check gate closer mechanism gas pressure. Report if pressure is below/above appropriate level. | <input type="checkbox"/> |
| 15 Lightly grease hinge bearings and closer pivots. | <input type="checkbox"/> |

Accessories (*as applicable*)

- | | |
|---|--------------------------|
| 16 Inspect and test digital keypad. Report any vandal damage or other defect. | <input type="checkbox"/> |
| 17 Telguard communication system – Contact manufacturers to check status. | <input type="checkbox"/> |
| 18 Reset any timers for summer time/winter time if necessary. | <input type="checkbox"/> |
| 19 Test every item of equipment for satisfactory operation and sign off. | <input type="checkbox"/> |

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		Pass
20	Scan running rail by taking line of sight. Report any damage or variation.	<input type="checkbox"/>
21	Check security of motor fixing bolts and base plate. Report any deterioration of concrete base.	<input type="checkbox"/>
22	Check motor cowling and brake cover for signs of overheating. Report any abnormal condition.	<input type="checkbox"/>
23	Ensure that cover vents are clear of debris and brush out apertures. Report any ingress of water.	<input type="checkbox"/>
24	Check electrobrake efficiency at each end of travel.	<input type="checkbox"/>
25	If authorised: – Remove covers, strip down electrobrake system check/replace electrobrake pads and adjust clearance to the recommended tolerance.	<input type="checkbox"/>
26	Check motor fail safe run time by noting relay contact drop out delay timing.	<input type="checkbox"/>
27	Test and approve manual release mechanisms. Lubricate lock with WD40.	<input type="checkbox"/>
28	If authorised: – Strip down manual release mechanism and clean/lubricate with graphite as required.	<input type="checkbox"/>
29	Check/adjust guide rollers and ensure tightness of fixing nuts.	<input type="checkbox"/>
30	Check upper guide rollers for flat spots indicating slippage. Report if worn.	<input type="checkbox"/>
31	Jack up gate at each end and check side play on roller wheels. Check and tighten wheel nuts.	<input type="checkbox"/>
32	Check free movement of limit switch actuator arm(s) and roller(s) and check for flat spots.	<input type="checkbox"/>
33	Check tightness of fixing screws.	<input type="checkbox"/>
34	If authorised: – Remove limit switch assemblies and replace.	<input type="checkbox"/>
35	Check limit actuators against closing/opening positions of gate and adjust as necessary.	<input type="checkbox"/>
Sliding Gate Motor and Transmission Gear		
36	Check and adjust pinion/rack-meshing backlash, resetting gap to provide recommended clearance.	<input type="checkbox"/>
37	Test pinion shaft end float. Report undue travel.	<input type="checkbox"/>
38	Apply graphite compound sparingly to pinion teeth faces if required – DO NOT USE OIL OR GREASE	<input type="checkbox"/>
39	Adjust limit toggles to maintain correct clearances at each end of gate travel.	<input type="checkbox"/>
40	<input type="checkbox"/>
41	<input type="checkbox"/>
42	<input type="checkbox"/>
43	<input type="checkbox"/>
44	<input type="checkbox"/>

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Swing Gate Installation	Pass
45 Scan pivot hinge alignment by taking line of sight. Report any damage or variation.	<input type="checkbox"/>
46 Check security of motor fixing bolts and base plate. Report any deterioration of concrete base(s).	<input type="checkbox"/>
47 Check motor cowling and covers for signs of overheating. Report any abnormal condition.	<input type="checkbox"/>
48 Ensure that vents and moving parts are clear of debris and brush out underfloor motor chambers. Report any ingress of water.	<input type="checkbox"/>
49 Check slow down efficiency at each end of travel – check gate does not slam.	<input type="checkbox"/>
50 <u>If authorised:</u> – Remove covers, strip down motor system check/replace any damaged or worn parts and adjust to the recommended tolerances.	<input type="checkbox"/>
51 Check gate hinges for wear. Report if unduly worn.	<input type="checkbox"/>
52 Lightly grease hinge bearings and end roller (if fitted).	<input type="checkbox"/>
53 Test and approve manual release mechanisms. Lubricate lock with WD40.	<input type="checkbox"/>
54 <u>If authorised:</u> – Strip down manual release mechanism and clean/lubricate with graphite as required.	<input type="checkbox"/>
55 Check/adjust motor run time by noting relay contact drop out delay timing.	<input type="checkbox"/>
56 Check operator pivots and lightly grease bearings. Check and tighten fixing nuts.	<input type="checkbox"/>
57 Check free movement of limit switch actuator arm(s) and roller(s) and check for flat spots.	<input type="checkbox"/>
58 Check tightness of fixing screws.	<input type="checkbox"/>
59 <u>If authorised:</u> – Remove limit switch assemblies and replace.	<input type="checkbox"/>
60 Check limit actuators against closing/opening positions of gate and adjust as necessary.	<input type="checkbox"/>

Swing Gate Motor and Transmission Gear – notes:

61	<input type="checkbox"/>
62	<input type="checkbox"/>
63	<input type="checkbox"/>
64	<input type="checkbox"/>
65	<input type="checkbox"/>
66	<input type="checkbox"/>
67	<input type="checkbox"/>
68	<input type="checkbox"/>
69	<input type="checkbox"/>

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Rising Arm Barrier Installation		Pass
70	Scan barrier arm by taking line of sight. Report any damage or variation.	<input type="checkbox"/>
71	Check security of barrier fixing bolts and base plate. Report any deterioration of or damage to concrete base or kerbstones.	<input type="checkbox"/>
72	Check motor cowling and gearbox for signs of overheating or over run past TDC. Report any abnormal condition.	<input type="checkbox"/>
73	Ensure that cabinet interior is clear of debris and brush out apertures. Report any ingress of water.	<input type="checkbox"/>
74	Check slow down efficiency at each end of travel – check barrier arm does not slam.	<input type="checkbox"/>
75	If authorised: – Remove covers, strip down motor and transmission system check/replace gearbox and adjust clearances to the recommended tolerances.	<input type="checkbox"/>
76	Check motor fail safe run time by noting relay contact drop out delay timing.	<input type="checkbox"/>
77	Test and approve manual release mechanisms. Lubricate cabinet lock with WD40.	<input type="checkbox"/>
78	If authorised: – Strip down manual release mechanism and clean/lubricate with graphite as required.	<input type="checkbox"/>
79	Check/adjust motor arm end stops and ensure tightness of fixing nuts.	<input type="checkbox"/>
80	Check transmission arm eye bolts. Report if worn.	<input type="checkbox"/>
81	Check arm lights and report if any bulbs require replacement.	<input type="checkbox"/>
82	Check free movement of limit switch actuator arm(s) and roller(s) and check for flat spots.	<input type="checkbox"/>
83	Check tightness of limit switch fixing screws.	<input type="checkbox"/>
84	If authorised: – Remove limit switch assemblies and replace.	<input type="checkbox"/>
85	Check limit actuators against closing/opening positions of arm and adjust as necessary.	<input type="checkbox"/>

Rising Arm Barrier Motor and Transmission Gear – notes:

86	<input type="checkbox"/>
87	<input type="checkbox"/>
88	<input type="checkbox"/>
89	<input type="checkbox"/>
90	<input type="checkbox"/>
91	<input type="checkbox"/>
92	<input type="checkbox"/>
93	<input type="checkbox"/>
94	<input type="checkbox"/>

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Safety (owner or his agent/nominee to check items 95 – 106 at least every month)		Pass
95	Check visually that supporting structures, hinges, bearings etc. are sound and secure.	<input type="checkbox"/>
96	Check visually that electric cables are in conduit, properly routed and undamaged	<input type="checkbox"/>
97	Clear any leaves or branches that may have fallen within any protected areas (Autumn).	<input type="checkbox"/>
98	Confirm user manual/instructions are available and up to date, report if otherwise.	<input type="checkbox"/>
99	Check that infra-red photocell protection beams are clear and unobstructed and wipe lenses with a soft dry cloth. Any interference that blocks the beam or any deterioration of the supply cable or other damage will be recognised as a fault and will cause the gates to stick in the open position, preventing them from closing.	<input type="checkbox"/>
100	Whilst the gate(s) are closing, cover each photocell lens in turn (<i>e.g. hold a postcard over one lens</i>). Ensure the gate(s) immediately stop or stop and return to the open position.	<input type="checkbox"/>
101	Check that the location of the mains isolator is identified and signed and that a CE Conformity plate is attached to the system.	<input type="checkbox"/>
102	The pneumatic cushions, mounted on the leading edges of exposed vertical members are designed to protect against closing gap hazards (crushing or cutting). Pressure against the rubber rib is transmitted to a sensor, which stops further movement of the gate(s).	<input type="checkbox"/>
103	Visually inspect each component for splitting or puncturing of the rubber or degeneration of the supply tubing, welded joints or other defect that could compromise safety by affecting the efficiency of the system. Test by depressing each cushion. Ensure the gate(s) immediately stop or stop and return to the open position.	<input type="checkbox"/>
104	<u>If specifically authorised by client</u> , test RCD and check cable markers (blue brown)	<input type="checkbox"/>
105	Check for any change in conditions or use patterns and assess impact, noting any deficit in advisable safety systems relevant to current norms.	<input type="checkbox"/>
106	Check that emergency manual release provides free running operation.	<input type="checkbox"/>
107	Test cushion ribs and tubes for pneumatic failure – advise client of implicit hazard and upgrade options.	<input type="checkbox"/>
108	Check positions of manual actuators are outside of risk zones, report if otherwise.	<input type="checkbox"/>
109	Check for any unprotected traps, report any areas of potential trapping.	<input type="checkbox"/>
110	Check and if necessary adjust torque setting to provide approved pressure at leading edge of the gate. Allow for seasonal variations. (<i>Place object in path; gate/barrier arm should stop and reverse movement. Check torque limit with force gauge to BS EN12543</i>)	<input type="checkbox"/>
111	Check that start-up, stop and emergency stop devices are functional.	<input type="checkbox"/>
112	Test drive pressure protection against crushing/dragging. (<i>Place object in path; gate/barrier arm should stop and reverse movement. Check torque limit with force gauge to BS EN12543</i>).	<input type="checkbox"/>
113	Check that any hazardous unprotected areas are shielded by a guard rail and/or warning signs.	<input type="checkbox"/>
114	Check that the physical restraints and stops preventing over-run or sliding gate de-railment are adequate and effective.	<input type="checkbox"/>
115	Check that both sides of gate/barrier are visible when in the closed position (any obstruction to operation should be apparent to users before operating the mechanism).	<input type="checkbox"/>

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Quality Control Procedure

Pass

- 116 Technician - Record test results and actions required and Report to client.
- 117 Quality Co-ordinator – complete analysis and contact client to confirm results.
- 118 Document Controller – File with customer documentation in accordance with Regulations currently in force.

Risk points—should be protected by safety systems:

- 119 Impact or Conveyor (*anywhere in the path of a gate/barrier arm*)

- 120 Trapping points (*where a moving part travels into a corner etc.*)

- 121 Shearing points (*where any two or more parts cross one another*)

- 122 Crushing points (*usually the leading edge of a gate or barrier arm*)



CLIENT REPORT

Warnings and Cautions (High or Low Risk), Recommended Safety Action & Urgency

	High	Low
123		
124		
125		
126		
127		
128		
129		
130		
131		
132		