Site Maintenance Procedures

Revision 3

Site Maintenance Procedures

This document contains important information pertaining to the servicing of a HUB site as well as procedures for logging calls, ordering consumables etc. It also gives a list of the responsibilities of the operators / owners on site from a first line maintenance perspective.

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1.   Entry Station - Tickets

It is important that tickets are replaced when advised by the Alarms module as the car park cannot be accessed without the customer obtaining a ticket.

To change the tickets follow the steps below:

1.1   **Ensure the lane is coned off to re-route incoming vehicles.**

1.2   Unlock the station door.

1.3   Power down the station by switching off both the white and black switches on the power supply. **This is very important as the unit will break if this is not done.**

1.4   Loosen the black screw on top of the reader (UCD). Unhinge the feeder unit from the reader and turn the feeder wheel on the reader and feeder to remove any remaining tickets. Replace and tighten.

1.5   Tear the lid off the new box of tickets. Please ensure that all perforated corners and adhesive tape is removed from the box to prevent tickets catching and the station jamming. If the arrow is not facing the top of the box to the right, the box has been opened on the bottom.

1.6   Place the new box of tickets in the holder ensuring that they this is positioned correctly- as a second check the magnetic strip must be facing the left hand side of the machine.

1.7   Insert the ticket string into the metal slot below the feeder unit and push it in until it is held by the rollers and does not fall out after letting go of the ticket string.

1.8   Turn the station back on. The feeder will then automatically load the first ticket, eject it and reload a second ticket. If the tickets do not feed automatically into the station press the white button as shown approx. 5 seconds after switch on.

1.9   Make sure you remove loose tickets etc. from inside the station.

1.10   Lock the station door and remove the cones.

2.   Exit Station - Tickets

The bins in the exit stations must be emptied regularly as they fill up quickly. There is a risk the machine can jam or catch fire if the tickets are not regularly emptied.

To empty the machine follows the steps below:

Ensure the lane is coned off to re-route oncoming vehicles

2.1   Unlock the station door.
2.2   Remove the bin from the door hinges by lifting upwards and pulling forwards.
2.3   Empty the tickets into a bin liner or other container.
2.4   Replace the bin back on the hinges (Ensure that the bin is seated properly in the hinges).
2.5   Lock the station door and remove the cones.

3. Shear Plate Replacement

To replace shear plate follow the steps below:

3.1 **Ensure the lane is coned off to re-route oncoming vehicles.**

3.2 Open the barrier door and set the barrier logic from the auto position to the down position.

3.3 Remove the bolts from the barrier mechanism.

3.4 Remove nuts and bolts from the shear plate and boom bracket.

3.5 Fit the new shear plate onto the boom arm and tightened the bolts.

3.6 Lift the boom arm and align the shear plate holes to the barrier mechanism.

3.7 Fit all bolts and tighten them (No 17 spanner). If any bolts are missing please contact HUB's Support Centre so that we can arrange for replacements.

3.8 Set the barrier logic back to the auto position

3.9 Remove the cone/s from the lane

4.   Ticket Jam

Ticket Jams can occur occasionally on an Entry, Exit, APS or other station. Below is the procedure to clear a jam at an Entry Station.

Always ensure the lane is coned off when working on a station

4.1   Unlock the station door.
4.2   Turn off the machine by switching both buttons off on the power supply.
4.3   Remove the tickets from the feeder escrow, including the single ticket at the back of the escrow unit.
4.4   Disconnect data and power cable from the UCD.
4.5   Remove the ticket feeder escrow from the UCD (Only on Entry / Exit with Creditcard Station).
4.6   Remove the UCD.
4.7   Clean the remaining tickets inside the feeder escrow and UCD.
4.8   Fit the UCD and feeder escrow back to the machine.
4.9   Connect data and power cables back to the UCD.
4.10   Feed tickets into feeder escrow (see page 3).
4.11   Switch the machine on and lock the door.

5.   APS – Changing Receipt Rolls (Orion)

The receipt rolls are positioned on the inside of the pay station machine door and must be replaced when advised by the ZMS Alarms that they are running low.

To change a receipt roll follow the steps below:

5.1   Unlock the pay station door.

5.2   Push the level sensor (the metal bar resting on the back of the roll) to the back and clip into place.

5.3   Remove the receipt roll holder removing any remaining paper.

5.4   Place the holder through the centre of the new receipt roll.

5.5   Feed the paper into the metal slot which will automatically pull the paper through, this   will continue for a couple of seconds, once this has stopped place the holder back into   the slots at either side.

5.6   Press the green lit button to feed another inch of paper through to ensure that it is ready for use.

5.7   Lock the pay station door.

6.   APS – Changing Receipt Rolls (Orion XR)

The receipt rolls are positioned on the inside of the pay station machine door and must be replaced when advised by the ZMS Alarms that they are running low.

To change a receipt roll follow the steps below:

6.1   Unlock the pay station door

6.2   Push the level sensor (the metal bar resting on the back of the roll) to the back and clip   into place

6.3   Remove the receipt roll holder pulling out any remaining paper.

6.4   Place the holder through the centre of the new receipt roll

6.5   Feed the paper into the metal slot which will automatically pull the paper through, this will continue for a couple of seconds, once this has stopped place the holder back into the slots at either side

6.6   Press the green lit button to feed another inch of paper through to ensure that it is ready for use

6.7   Lock the pay station door

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7. Regular Reader (UCD) cleaning

HUB supplies special cleaning cards for cleaning the UCD (Universal Card-reading Device). The cards are moistened with a special cleaning fluid to assist with removing dirt from the magnetic head and rollers of the reader.

To use a cleaning card:

Ensure the lane is coned off to re-route oncoming vehicles

7.1   Remove the cleaning card from the sealed sachet.

7.2   Insert it into the slot and remove it when it is returned. (You may need to activate the loop on an Entry or Exit station to do this)

7.3   Repeat this ten times while the card is still moist.

7.4   Allow the fluid to evaporate so that the card is dry to the touch then re-insert.

7.5   Remove the card and discard.

This should be done weekly and more often if the machine is getting heavy use. It is good practice to run a cleaning card through the UCD every time you install a new cassette of tickets.

Please also run the reader status report regularly (ZMS Revision 4.1 onwards) to determine if there are any units that need specific attention.

If the UCD is performing poorly dirt is the most likely cause. Clean and check before reporting it as faulty.

![HUB logo]

8.   COIN SAFE

Changing a coin safe:

8.1.1   Open pay station door.

8.1.2   Unlock the pull-out lock that is accessible on the front of the safe and carefully pull the coin safe out. A money statistics report is automatically printed and must accompany the safe.

8.1.3   Insert an empty, reset safe (see below) and push it back until it locks into place.

8.1.4   Check the safe if is properly in place.

8.1.5   Take the money statistics print-out.

8.1.6   Lock the door of the payment station.

Resetting a coin safe:

8.2.1   Unlock the lid with the corresponding key.

8.2.2   Empty the safe contents.

8.2.3   Turn the lid in order to have access to its inner side.

8.2.4   Turn the key in the safe removal lock 90 degree's.

8.2.5   Push the leaf spring carefully to the side and push the slide until it stops.

8.2.6   Holding the slide in this position, turn the key in the safe removal lock 90 degree's back and remove the key.

8.2.7   Turn the lid over and unlock the upper locking cylinder.

8.2.8   Set the lid on the upper safe rim and slide it all the way to the back.

8.2.9   Lock the lid with the corresponding key.

8.2.10 The safe is now ready for re-insertion.

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9. NOTE SAFE (BNA)

Changing a note safe (BNA):

9.1.1   Open the service door of the payment station.
9.1.2   Turn the key in the safe removal lock 90 degree clockwise and carefully remove the banknote safe.
9.1.3   A money statistics report is printed automatically.
9.1.4   Check whether the new safe is ready for installation (reset – see below).
9.1.5   Push the empty safe in and lock it in place with the key.
9.1.6   Check that the note safe if is properly in place.
9.1.7   Lock auto pay station door.

Resetting a note safe (BNA):

9.2.1   Insert the key in the lock on the banknote safe lid and turn it clockwise by 90 degrees.
9.2.2   Open the lid of the banknote safe.
9.2.3   Pull out the banknotes from the safe.
9.2.4   Insert the key in the pull-out lock and turn the key 90 degree clockwise.
9.2.5   Pull the lever back and push the shutter all the way back.
9.2.6   Hold it in place and turn the key anti-clockwise.
9.2.7   Close the lid of the banknote safe.

10. NOTE SAFE (MFL)

Changing the note safe (MFL):

10.1.1   Open the service door of the payment station.
10.1.2   Turn the safe removal key 90 degrees anticlockwise and carefully remove the safe.
10.1.3   A money statistics report is printed automatically
10.1.4   Check whether the safe being installed has been reset (see below).
10.1.5   Push the empty safe in and lock it in place with the key.
10.1.6   Check that note safe if is properly in place.
10.1.7   Lock the pay station door.

Removing banknotes and resetting the safe (MFL)

10.2.1   Insert the key in the lock on the banknote safe lid, pushing slightly on the key against the spring force of the lock and turn it anticlockwise 90 degree's.
10.2.2   Open the lid of the banknote safe.
10.2.3   Remove the banknotes from the stacking device.
10.2.4   Close the lid of the banknote safe.

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11. Different types of coin and note jams

11.1 Clearing Coin Jam Mars (560,690.7900):

11.1.1 Open the automatic pay station door.

11.1.2 Switch off the station at the power supply.

11.1.3 Remove coin unit enclosure and hang it on the brass hook provided (to prevent damage)

11.1.4 Press the reject lever.

11.1.5 Open the acceptor module and check for jammed coins. Close after checking.

11.1.6 Remove coin tube and check for jammed coins on both the top and bottom of the unit.

11.1.7 Check coin tubes to ensure that all coins are flat in the unit.

11.1.8 Reinsert the coin tubes into the coin unit.

11.1.9 Reinsert the coin unit into coin unit enclosure.

11.1.10   Switch the automatic pay station back on the power supply.

11.1.11   Close and lock the pay station door.

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11.2 Clearing Coin Jam (RCU):

11.2.1   Open the automatic pay station door.
11.2.2   Switch off the station at the power supply.
11.2.3   Loosen coin acceptor bracket screws and slide the coin accepter backwards.
11.2.4   Remove the data cable from the coin acceptor.
11.2.5   Remove the coin acceptor from the bracket.
11.2.6   Open validator lid and check if there are any coins jammed inside the unit.
11.2.7   Check if there are any coins in the coin separator or coin distributor block (White block).
11.2.8   Open the hopper drawer with the key and check if there is a mix of coins in the hoppers caused by the jam.
11.2.9   Close the hopper drawer.
11.2.10   Remount the coin validator and connect data cable.
11.2.11   Switch on pay station power.
11.2.12   After pay station has reset check if coin validator led light is green (Board on the RCU unit).

After pay station has reset check if coin validator led light is green (Board on the RCU unit).
Close the automatic pay station door.

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11.3 Clearing Note jam (BNA):

11.3.1   Open the automatic pay station door.
11.3.2   Push back handle at the back of the reader and open top section of the reader.
11.3.3   Check for any note jam.
11.3.4   Close note reader and
11.3.5   Close auto pay station door.
11.3.6   If the problem persists remove the note safe and determine whether there is a note jammed when
         feeding into the note safe. Replace the note safe with a reset unit and test.

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11.4 Note jams (B2B and MFL):

If banknotes get jammed in the CashCode Bill-to-Bill, You will need to open the respective part of the device to be able to remove any jammed or crumpled banknotes.

Unlock and open the service door of the Pay Station. Access the respective part of the Cashcode MFL or Bill-to-Bill reader.

Accessing the banknote path on the validating head

There are two guides in the validating head that must be opened to access the banknote path. If space above the CashCode Bill-to-Bill allows, the guides in the validating head can be opened without removing the validating head from the housing. Otherwise the validating head must be removed before opening the guides.

Accessing the banknote path in the validating head: If you need to remove the validating head from the housing, lift the latch at the bottom of the validating head. Gently remove the validating head from the housing.

Accessing the banknote path in the chassis and cassettes:

Note: Neither the recycling cassettes nor the dispensing cassettes can be removed from device without the chassis being removed from the housing.

The recycling cassettes, the dispensing cassette and the path switch are mounted in a chassis.
In order to access the banknote path, you must remove the entire chassis from the housing of the CashCode Bill-to-Bill.

Removing the chassis from the housing.

Insert the key in the lock below the chassis. Slightly push in the key against the spring force of the lock and turn it counter-clockwise by 90°. Push in the bar at the top of the chassis to release the chassis.
CAUTION! The chassis and cassettes are heavy. Please support the module beneath the chassis when pulling it out of the housing!

Take hold of the handle on the front of the chassis and pull out the chassis and contents horizontally.Set the chassis and cassettes down on a suitable surface.

Opening the chassis and accessing the path switch

To open the chassis and access the path switch, first push one of the release buttons on the chassis.
Fold out the two halves of the chassis. The gas spring supports the halves of the chassis.

Release the recycling cassette by sliding the locking latch to the open position. Pull out the recycling cassette from the chassis.

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Release the dispensing cassette by sliding the locking latch to the open position. Pull out the dispensing cassette from the chassis. To open the dispensing cassette, slide the locking latch to the open position and fold out the cassette lid.

12. Power failures

In the event of a power failure please follow the procedure below to ensure that the parking system is protected from damage

12.1   Power down all entry, exit lanes and barriers at the power switch situated within each unit. This is to ensure that barriers do not hit vehicles on power up. It also protects the equipment from power surges when the power is restored.

12.2   Once the power is switched off push the barrier arms into the up or open position.

12.3   Power down all APS's at the power switch.

12.4   Shut down the ZMS system (Stop ZMS) and power down all the ZMS computers (START – SHUT DOWN). This may require the manager level password.

12.5   Once the power is restored and stable power up all equipment. It is recommended to start with entries, then APS's, the ZMS system and then exits.

13. Resetting a barrier

In the event of a power failure or power dip you may experience a problem with a barrier not operating correctly. If this occurs please follow the procedure below,

Ensure the lane is coned off to re-route oncoming vehicles

13.1   Power down the entry / exit lane and barrier at the power switch situated within each unit.

13.2   Switch on the entry/exit lane and wait for it to boot up.

13.3   Switch on the barrier and wait for all lights on the barrier panel to stop flashing.

13.4   Once all lights have stopped flashing you can reopen the lane to traffic.

13.5   If the lights continue to flash keep the lane closed and log a call with HUB.

14. Service Check list

	ZMS PC
Below is the check list of items that need to be completed during a HUB Service of the equipment. If, on review after the service it is noted that these have not been done please contact the HUB Call Centre.	Clean PC and brush out PC PSU (External) Do windows maintenance e.g. scandisk, defrag (if site permits) Clean keyboard and mouse Check and test UPS Do OPMS.mdb backup and repair Perform OPMS and Parameter backup Check scheduled backup are operational Check for sufficient disk space on PC Check system date and time (compare to Telkom 1026)
COMMON – Lane Stations, APS's, Cashiers Remove loose tickets from stations Clean dirt, cob-webs, etc from station using a blower or mini-vacuum Test if housing is loose and re-secure Clean extractor fan filter (replace if necessary) Test extractor fan and heater and adjust thermostat to suit local conditions. Make sure no tickets etc obstruct fan/heater Check the door locking mechanisms and lubricate if needed Check ticket low switch for correct operation and adjust if necessary Clean dust from display and Perspex with anti-static spray. Check if the display is readable and replace if necessary Check if PCU is firmly secured Check PCU I/O and comms plugs are securely inserted and check for loose wires Check all cables for noticeable damage and replace as needed Tidy and secure all loose cables inside stations Test intercom button and intercoms for clarity Check all PSU power connector pins and cables and replace as needed Check PCU battery, if under 3V DC, replace Check if incoming mains power is secure and safe. Test PSU switches Clean APS thermal receipt printer rollers and test with PTM Check and test UPS (if fitted) Check money tray lamp and user guide lamps	**COMMON - UCD's, Feeders & Escrows (Including Validators)** Check transport rollers for damage and replace if necessary Clean transport rollers Clean and check mag head and replace if necessary Clean printer and check print quality check shaft on the solenoid for wear / damage Check and clean transport belt, if worn, replace Clean non-toothed gears, check if all grub screws are present and tighten Clean guide plates and ensure these are not bent Replace optics on UCD and Feeder Escrow Check the tension of the plastic transport rollers Ensure that all cover screws are replaced and properly tightened Ensure that UCD is secured on mounting plate and does not move backwards Ensure the correct head gap is present for UCD99 and UCD02 Check the pins for damage connecting UCD and Feeders Remove feeder cover plate with hex key to remove dirt under plate Check tension on feeder/escrow rollers and replace if needed Check the guillotine operation Check the feeder/escrow teethed guide plates if bent and straighten if necessary Calibrate UCD/feeder/escrow as per version of UCD With PTM do 5 read / write tests with both paper ticket and DP card Ensure that the plastic card holder is in place behind the UCD on entries and APS's

Barriers – Entry, Exit, Passby, ZLC, Free	APS's – Money handling Systems
Align arms Check and tighten all bolts and nuts Ensure barrier housing is not loose and tighten if necessary Ensure the spring is tensioned correctly i.e. arm opens and closes at the same speed Check that crank arm is securely fitted to motor shaft and the rest of the crank mechanism Replace all worn rubber stoppers Clean barrier inside Check loop detectors inserted correctly with the correct frequency settings Check for cross talk between lanes and adjust if necessary Check barrier logic e.g. inserted correctly Check relay e.g. inserted correctly Secure incoming mains Check barrier drive cable is securely inserted and there are no loose wires Check condition of road surface where loops are and check loop condition Check barrier arm condition, jack knife kits, barrier arm brackets and sheer plates and report Check barrier door locks and secure	Clean discriminator and optics Ensure that all coin paddles are working Ensure all tubes are OK Clean plastic transport rollers of note readers and all excess dust from units Clean scanners of the note readers B2B clean optics and plastic transport rollers B2B clean and check contacts of both cassettes and recycling unit Check and clean the contact switches of both note and coin safes Clean and lubricate the coin safe lid mechanisms (if possible) Clean RCU acceptors and hoppers Check coin deflector plate is straight on RCU05 Check the solenoid and refill switch for correct operation MK4 hoppers, check both male and female plugs Reconcile APS if requested Check change tray flap moves freely and returns to closed position after use Check and repair damage to safe

15. Ordering of consumables

Please follow your internal procedures when ordering consumables. All orders should be placed with our consumables sales department on 011 7944 525 or on 0861 ZEAG SA (0861 932472). Please contact the same department when following up with the delivery of any consumables.

HUB Consumables
Magnetic Stripe Tickets (80 000 to 4 Million+) Barcode Tickets (80 000 to 4 Million+)
APS Receipt Rolls (50 in a box) (300 - 400 receipts)
Cashier Station Rolls (50 in a box) (300 - 400 receipts)
Cleaning Cards (50 in a box)
Magstripe Access Cards (Plain)
Magstripe Access Cards (with logo)
Proximity Access Cards
Cashier Printer Ribbons SP200 Barrier protection shearplates Laser printer cartridges

* It is important to note that in order not to void warranties on third party products such as laser and receipt printers original equipment manufacturer ribbons and cartridges should be used at all times. Paper used in the printers should always be new and should be free from staples etc.

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16. Call logging procedure

The following procedure should be followed when placing a call for breakdown service:-

During office Hours –

- Please call the office hours telephone numbers listed below. **NB,** please **do not**

  try to place service calls directly with service engineers, or other HUB personnel. **All** service requests **must** be routed via the service telephone numbers listed below. Requests via individuals cannot be logged by the service telephone system, and subsequently cannot be controlled in the correct manner.

Office hours call logging number	0861 ZEAG SA
	0861 932472
	011 7944 525

- Ask for the Service Administrator, once connected, please state the following:
  - ➢ site location;
  - ➢ the name of the person placing the call;
  - ➢ a contact person on site and telephone number (if different to the person placing the call);
- The exact nature of the problem and requested action. **Please ensure that you get a reference number from the Service Administrator, this is your call-out number and confirms your proof of a request for service. Without this number your call-out cannot be followed up.**
- The HUB service engineer will then report to the parking control office when he/she arrives on site. Please ensure that this arrival time and date, and correct call-out reference number (relayed to the person reporting the service request – see above) is logged on the HUB service report when the call is completed.
- If the task is completed please inspect the work performed, ensure that the equipment is working correctly, and sign the service report to signify that you (as an employee authorized to do so) are satisfied that the work is in fact complete.

HUB

After office Hours –

Please call the cellular phone number relating to your region as listed below.

After hours call logging number	For all after hours calls
Region 1 (Green)	**082 554 0132**
Region 2 (Orange)	**083 743 3880**
Region 3 (Blue)	**083 711 5548**
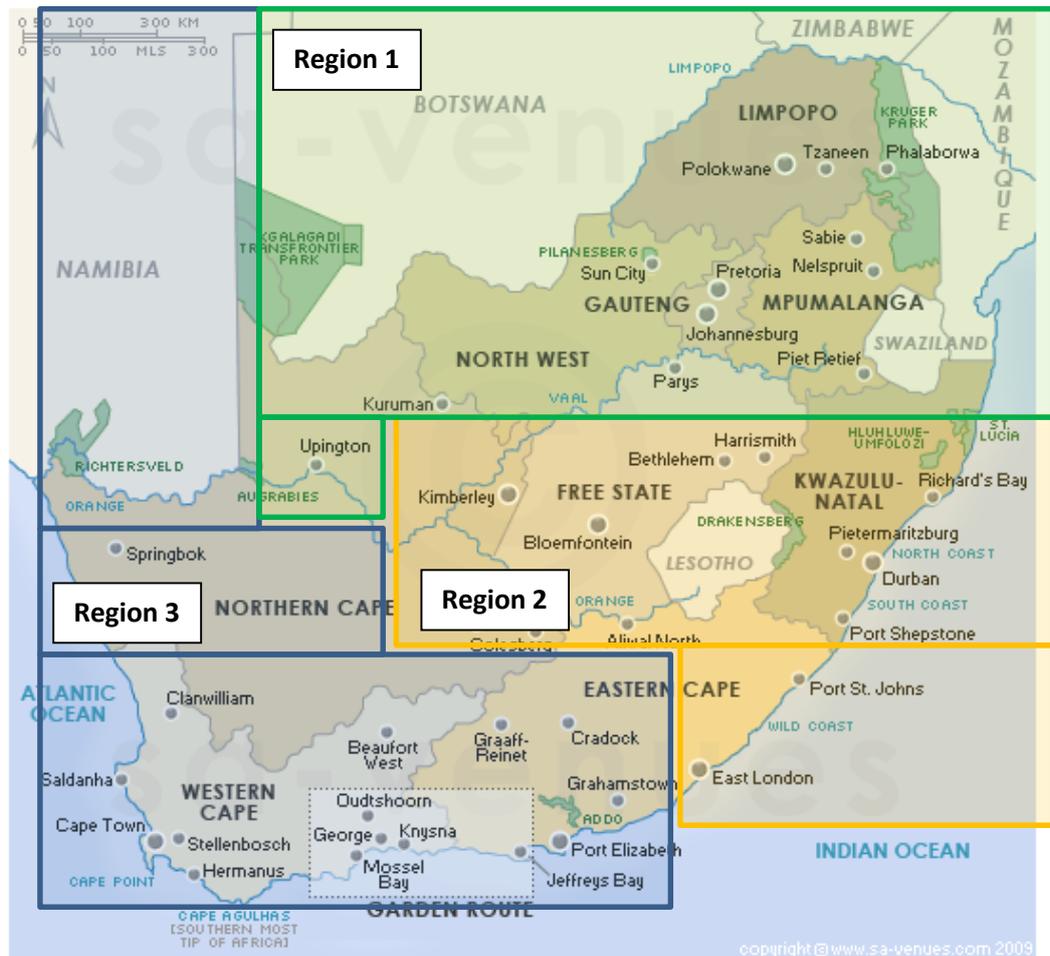
- Once connected, please state the following:
  - ➢ site location;
  - ➢ the name of the person placing the call;
  - ➢ a contact person on site and telephone number (if different to the person placing the call);

- The exact nature of the problem and requested action. **Please ensure that you get a reference number from the technician. This is your call-out number and confirms your proof of a request for service. Without this number your call-out cannot be followed up.**

- The HUB service engineer will then report to the parking control office when he arrives on site. Please ensure that this arrival time and date, and correct call-out reference number (relayed to the person reporting the service request – see above) is logged on the HUB service report when the call is completed.

- **If the task is completed please inspect the work performed, ensure that the equipment is working correctly, and sign the service report to signify that you (as an employee authorized to do so) are satisfied that the work is in fact complete.**

In the event you have any complaints regarding any service received from HUB, please contact the Service Manager, enabling us to take appropriate action and minimize any inconvenience experienced. He can be contacted on 082 497 8782. If you are unable to contact the Service Manager please call the following numbers relating to your Region,

Alternative numbers	In case of an urgent call – Please state that you are unable to get hold of the standby number
Region 1 (Green)	**082 883 1511** **082 894 6531** **082 497 8782**
Region 2 (Orange)	**082 894 6532** **082 4978781**
Region 3 (Blue)	**083 320 4437** **083 257 3502**

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Important Numbers

(Please see detailed callout procedures on pages 21 to 23)

Office contact details:

Please ask for the Service Administrator if logging a call.

Office hours call logging number	0861 ZEAG SA
Alternatives	**0861 932472 / 011 794 4525**
HUB Head Office **Tel:** **Fax:**	 **011 7944 525** **011 7944587**
Physical Address:	**166 Seilskip Street** **Laser Park** **Honeydew, 2170**
Postal Address:	**P.O. Box 669** **Ferndale, 2160**

Callout - After office Hours

Please call the cellular phone number relating to your region as listed below.