



SMITH & LONG

SMITH AND LONG MECHANICAL LIMITED
Formerly Main Air Systems
115 Idema Road
Markham ON L3R 1A9

Mechanical • HVAC Services • Electrical • 24 Hour Response
T 905.670.7015 F 905.670.7019 www.smithandlong.com

Work Order # 159893 Details

Call Type	PreventiveMaint
Caller	Robert Hinich
Date Created	2020-08-04
Purchase Order	PO# 01577
Job #	S003569
Date Completed	Aug. 26, 2020 - 8:34:42 a.m.

Site Information

441 Old Brock Rd / HWDSB Spencer Valley
441 Old Brock Road
Dundas, ON L9H 6A7
Phone: (000)000-0000

Billing Information

Hamilton Wentworth District School Board
20 Education Court
Hamilton, ON L9A 0B9

Work Requested

- o Check for particulate accumulation on filters, replace filter as needed if material is already on-site. Verify filters are sized and installed correctly. Clean and remove louver obstructions.
 - o Check all motors and fans operate correctly. Grease/oil as required.
 - o Check belts are tight and in good condition.
- Replace as required.
- o Check variable-frequency drive for proper operation.
 - o Check drain pans for cleanliness and proper slope. Check P-trap on drain pan for proper operation. Clean as required.
 - o Verify control dampers operate properly.
 - o Confirm equipment is bringing in outdoor air and removing exhaust air as intended.

Equipment Name: Servi-HVAC

Model:

Manufacturer:

Serial Number:

Work Requested

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 - o Check all motors and fans operate correctly. Grease/oil as required.
 - o Check belts are tight and in good condition.
- Replace as required.
- o Check variable-frequency drive for proper operation.
 - o Check drain pans for cleanliness and proper slope. Check P-trap on drain pan for proper operation. Clean as required.
 - o Verify control dampers operate properly.
 - o Confirm equipment is bringing in outdoor air and removing exhaust air as intended.

Work Performed

Aug. 24/25/26, 2020
Met with custodial staff- gained access to various classrooms, mech. rms, and roof.
Located 2 spare belts on site and used them for exhausters.

Equipment Name: Change Rm. ERV-1

Model: ERV20001 DG1BS1DNBTS2

Manufacturer: Venmarr

Serial Number: 6AH8200407321469

Work Performed

Aug. 24/25, 2020
Went through wiring diagram. Went over BAS control wiring. Installed various jumpers to bypass BAS control. Tested operation of Supply and Exhaust fans. Tested operation of motor driven HRV wheel. All operational. Checked condition of bearings and pulleys- found to be ok.
O/A damper motor internal to unit operational.
Duct mounted O/A damper fixed open and control wiring disconnected.
Filters- 2 of 24x24x2"pl
Belt- Supply Fan- 1 of B41
Exh Fan- 1 of B41
Filters in good condition. Both belts worn and cracked. No spare belts on site. Belts should be replaced.

Equipment Name: Gym RTU

Model: 48TME014-A-101---



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Manufacturer: Carrier

Serial Number: 1304G30717

Work Performed

Aug. 24/25, 2020
Found filters dirty, evaporator dirty with surface debris. Brush cleaned and removed all surface debris off of evaporator, cleaned with coil cleaner. Removed p-trap and flushed. Sprayed evap coil down with water, flushing all debris out of pan, re-installed trap.

Installed new filters from on-site stock.
Found blower motor overload breaker tripped. Found belt to be loose. Tightened up belt tension, re-set breaker and tested.
Blower motor- 4.5, 4.4, 4.4 Amps.
Jumpered unit to test A/C operation. Compressors not starting up.
Went through economizer control- found to be defective.

Bypassed economizer 24V- tested 1st and 2nd stage mechanical cooling operation. Connected smart probes- system pressures- found to be ok, cond fan operation ok.
Will provide price to replace economizer controller.

Equipment Name: FC-1- Music and Instrumental Rm.

Model: FA4BNF036

Manufacturer: Carrier

Serial Number: 2504A80594

Work Performed

Aug. 24/25, 2020
Found Evaporator coil, suction line solid ice.
Blower motor seized- 208V going to motor, but motor not operating.
Will provide price to replace blower motor, than further test unit.
Shut off power to condenser.

Equipment Name: ChangeAir Rm 16

Model: CAH 1000 PA VP D

Manufacturer: ChangeAir

Serial Number: 1093 0204G

Work Performed

Aug. 24/25, 2020
Door switch not making.
Disconnected wires and bypassed door switch.
Inspected unit- checked all electrical and connections, drainpan clean, filters in good condition.
Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.

Filters- 2 of 16x16x1"pl

Equipment Name: ChangeAir Rm. 15

Model: CAH 1000 PA VP D

Manufacturer: ChangeAir

Serial Number: 1095 0204G

Work Performed

Aug. 24/25, 2020
Inspected unit- checked all electrical and connections, drainpan clean, filters in good condition.
Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.
Filters- 2 of 16x16x1"pl

Equipment Name: Change Air Rm. 14

Model: CAH 1000 PA VP D



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Manufacturer: Change Air

Serial Number: 1100 0204G

Work Performed

Aug. 24/25, 2020

Inspected unit- checked all electrical and connections, filters in good condition. Evap drain pan very rusted and starting to deteriorate- no visible holes or cracks present at this time- filled with water- ensured proper drainage.

Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.

Filters- 2 of 16x16x1"pl

Equipment Name: ChangeAir Rm 13

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1098 0204G

Work Performed

Aug. 24/25, 2020

Inspected unit- checked all electrical and connections, drainpan clean, filters in good condition.

Bypassed BAS and installed jumper to test A/C operation- Unit running high head pressure- inspected cond coil- blew out w/nitrogen. Brushed off all loose debris from discharge wall grille outside.

Head pressure has come down, but still somewhat high.

Filters- 2 of 16x16x1"pl

Equipment Name: Change Air Rm. 12B

Model: CAH 1000A PA VP DD

Manufacturer: Change Air

Serial Number: 1764 0035J

Work Performed

Aug. 24/25, 2020

Inspected unit- checked all electrical and connections, found drainpan clean.

Removed plugged up washable filters and left inside unit. Replaced with pleated filters instead.

Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.

Filters- now 2 of 16x16x1"pl

Equipment Name: Change Air Rm. 12A

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1102 0204G

Work Performed

Aug. 24/25, 2020

Inspected unit- checked all electrical and connections, drainpan clean, filters in good condition.

Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.

Filters- 2 of 16x16x1"pl



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Equipment Name: Change Air Rm 11

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1105 0204G

Work Performed

Aug. 24/25, 2020
Inspected unit- checked all electrical and connections, drainpan clean, filters in good condition.
Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.
Filters- 2 of 16x16x1"pl

Equipment Name: Change Air Rm. 10

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1104 0204G

Work Performed

Aug. 24/25, 2020
Inspected unit- checked all electrical and connections- ok, found filters in good condition.
Found evap drain pan backed up, not draining. Disconnected drain line a blew out with nitrogen, Filled pan multiple times with water, flushed out remaining debris into bucket.
Re-connected drain line. Re-filled drain pan and ensuref proper drainage- Now unit draining.
Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.
Filters- 2 of 16x16x1"pl

Equipment Name: ChangeAir Rm 8

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1096 0204G

Work Performed

Aug. 24/25, 2020
Inspected unit- checked all electrical and connections, found filters in good condition.
Cleared obstruction in drain pan. Filled drain pan with water- monitored as all water drained out- ok.
Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.
Filters- 2 of 16x16x1"pl

Equipment Name: Change Air Rm. 6

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1103 0204G

Work Performed

Aug. 24/25, 2020
Inspected unit- checked all electrical and connections, drainpan clean, filters in good condition.
Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.
Filters- 2 of 16x16x1"pl

Equipment Name: Change Air Rm. 5

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1107 0204G



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Work Performed

Aug. 24/25, 2020
Found blower motor intermittently running, cycling on and off.
Inspected unit- Found bad connection at contact of blower relay. Repaired bad spade connection and re-tested.
Unit now operational.
Tested A/C operation, inspected drain pan, coils, monitored operation- all ok.

Filters- 2 of 16x16x1"pl

Equipment Name: Change Air Rm. 3

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1094 0204G

Work Performed

Aug. 24/25, 2020
Inspected unit- checked all electrical and connections, drainpan clean, filters in good condition.
Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.
Filters- 2 of 16x16x1"pl

Equipment Name: Change Air Rm 2

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1106 0204G

Work Performed

Aug. 24/25, 2020
Found filters plugged. Replaced filters with on site stock.
Evap drain pan backed up. Disconnected drain hose, blew out debris with nitrogen, re-connected drain hose. Filled pan with water and ensured proper drainage- all ok.
Found heating valve control wiring- 2 of 3 marettes fallen off- control wire too short- wire stretched.

Re-ran new piece of 18/4 thermostat wire- secured properly, tested heating valve- all ok.

Installed jumper- tested A/C operation- found all to be ok.
Filters- 2 of 16x16x1"pl

Equipment Name: Change Air- Main Office

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1099 0204G

Work Performed

Aug. 24/25, 2020
Inspected unit- checked all electrical and connections, drainpan clean, filters found to be dirty. Replaced with on site stock.
Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.
Filters- 2 of 16x16x1"pl



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Equipment Name: Change Air- Staff Room

Model: CAH 1000 PA VP D

Manufacturer: Change Air

Serial Number: 1402 0304H

Work Performed

Aug. 24/25, 2020

Inspected unit- checked all electrical and connections, drainpan clean, filters found to be dirty. Replaced with on site stock.
Bypassed BAS and installed jumper to test A/C operation- found all to be operational at this time.

Filters- 2 of 16x16x1"pl

Equipment Name: Change Air- Portable 310

Model: CAE 1000 PA VP D

Manufacturer: Change Air

Serial Number: 2819 0153 G

Work Performed

Aug. 24/25, 2020

Inspected unit- checked all electrical and connections, drainpan clean, filters found to be dirty. Replaced with on site stock.
Bypassed BAS and installed jumpers to test A/C and fan operation- found all to be operational at this time.

Filters- 2 of 16x16x1"pl

Equipment Name: Change Air- Portable 311

Model: CAE 1000A PA VP F

Manufacturer: Change Air

Serial Number: 1421 0079I

Work Performed

Aug. 24/25, 2020

Removed washable filters and cleaned, re-installed.

Inspected unit- checked all electrical and connections, found drainpan to be clean.

Bypassed BAS and installed jumpers to test A/C and fan operation- found all to be operational at this time.

Filters- 2 of 16x16 washable filters

Equipment Name: Change Air- Portable 312

Model: CAE 1000 PA VP D

Manufacturer: Change Air

Serial Number: 6840 0181G

Work Performed

Aug. 24/25, 2020

Replaced dirty filter with on site stock.

Inspected unit- checked all electrical and connections, drainpan clean.

Bypassed BAS and installed jumpers to test A/C and fan operation- found all to be operational at this time.

Filters- 1 of 16x32x1"pl

Equipment Name: Condenser (FC-1)

Model: 38HDL036-311

Manufacturer: Carrier

Serial Number: 2304X89993

Work Performed

Aug. 24/25, 2020

Suction line solid ice due to defective indoor blower motor (FC-1)

Shut off power.



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Equipment Name: Exhauster1
Manufacturer: Solar and Palau

Model: DB16MH1S
Serial Number: WSC 3188613

Work Performed

Aug. 26, 2020
Found unit turned off at roof. Turned on. Greased bearings, inspected pulleys- found to be ok. Belt in good condition.
Tested operation- found all to be operational at this time.
1 of A23

Equipment Name: Exhauster 2
Manufacturer: Centri Master

Model: PV165
Serial Number: 04D073707

Work Performed

Aug. 26, 2020
No power at line side of switch.
Belt broken, in multiple pieces. Turned motor pulley by hand- bearings locked up.
Will provide quotation to replaced motor with new belt.
Belt size ?

Equipment Name: Exhauster 3
Manufacturer: no nameplate

Model: no nameplate
Serial Number: no nameplate

Work Performed

Aug. 26, 2020
No power at line side of switch.
Able to spin motor/driven shaft by hand.
Bearings in good condition, lubricated bearings.
Belt in good condition.
1 of 4L260

Equipment Name: Exhauster 4
Manufacturer: Sheldons Engineering

Model: 11A1
Serial Number: 3RV

Work Performed

Aug. 26, 2020
Found belt broken, motor running.
Greased bearings, inspected pulleys- all ok.
Installed spare belt, adjusted tension.
All operational at this time.
1 of A26



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Equipment Name: Exhauster 5

Model: PV165

Manufacturer: Centri Master

Serial Number: 04D073701

Work Performed

Aug. 26, 2020
Found no power at line side of switch.
Checked breaker panels inside storage room- nothing labelled for exhauster, all breakers on.
Bearings not requiring lubrication, belt and pulleys in good condition.
Motor spins freely.
1 of AX26

Equipment Name: Exhauster 6

Model: PV165

Manufacturer: Centri Master

Serial Number: 04D073701

Work Performed

Aug. 26, 2020
Bearings not requiring lubrication.
Belt and pulleys in good condition.
Unit operational at this time.
1 of AX26

Equipment Name: Exhauster7

Model: 11A1

Manufacturer: Sheldons Engineering

Serial Number: SRV

Work Performed

Aug. 26, 2020
No power at line side of disconnect.
No belt in unit.
Pulleys severely rusted.
Suspect exhauster has not ran for years.

Equipment Name: FreshAirFan1- Roof

Model: no nameplate

Manufacturer: Delhi

Serial Number: no nameplate

Work Performed

Aug. 26, 2020
No power at line side of disconnect.
Removed washable filters and cleaned, re-installed.
Bearings non-greasable style.
Motor spins freely. Belt cracked and worn.
Unable to test operation.
1 of Gates Truflex 13R 1015 2400 Belt

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Equipment Name: Exhauster 8**Model: PV165****Manufacturer: Centri Master****Serial Number: 04D073707****Work Performed**

Aug. 26, 2020
Found unit running. Belt and pulleys in good condition. Bearings not requiring lubrication.
All operational at this time.
1 of 3L250

Equipment Name: Exhauster 9**Model: 11A1****Manufacturer: Sheldons Engineering****Serial Number: SRV****Work Performed**

Aug. 26, 2020
Aug. 26, 2020
Found unit running. Belt in good condition. Pulleys very rusted, but pulley grooves ok.
Greased bearings.
All operational at this time.
1 of A24

Equipment Name: Exhauster 10**Model: 12AR****Manufacturer: Sheldons Engineering****Serial Number: SRV****Work Performed**

Aug. 26, 2020
Found belt broken, motor running.
Installed spare belt and adjusted tension.
Greased bearings, checked condition of pulleys- found all to operational at this time.
1 of AX26

Summary**Labor Detail**

Technician	Equipment	Labor Type Id	Date	Hours
Thomas Herridge	SV-HVAC	MECH	2020-08-24	8
Thomas Herridge	SV-HVAC	MECH	2020-08-25	8
Thomas Herridge	Exhauster2	MECH	2020-08-26	2
Total				18



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Material / Misc / Flat Rate Details

Equipment	Item	Description	Quantity
Change Air 10	ELECTRICAL MISC	ELECTRICAL MISC	1
Change Air12	NITROGEN-CONSUMABLES	NITROGEN CONSUMABLES	1
Change Air12	ELECTRICAL MISC	ELECTRICAL MISC	1
ChangeAir3	NITROGEN-CONSUMABLES	NITROGEN CONSUMABLES	1
Gym RTU	*Non-inventory*	can Viper coil cleaner- Thomas truck stock	1
SV-HVAC	*Non-inventory*	grease gun cartridge TH truck stock	1

Customer Signature

Customer Name: n/a

This receipt may not reflect all applicable charges due to Smith & Long, and should not be considered as final. Final charges will be as detailed on your invoice sent following this service call.

[Location Upon Signature](#)