### **CyRide**

### Ames Transit Agency Facility Maintenance Plan

Revised June, 2011



#### POLICY

CyRide has made a significant investment of public funds in a facility capable of supporting the daily operations of the transit system. The main facility was completed in 1984 with expansions in 1990, 2003, 2005, and 2008. CyRide desires to maintain its facilities and equipment to the highest possible standards.

Safety and good housekeeping practices compliment each other and at CyRide they are everyone's responsibility. Maintenance employees are required to attend monthly OSHA training meetings. They are also required to attend monthly maintenance meetings where accidents are analyzed and systemic improvements are discussed. Keeping the facility safe and clean and free of clutter is the responsibility of every maintenance division employee.

The Assistant Transit Director - Fleet and Facilities is responsible for the facility maintenance plan. The Assistant Director may appoint a subordinate to supervise the implementation and management of the facility maintenance plan.

#### **OBJECTIVE**

The objective of the facilities maintenance plan is ensuring that assets are protected and maintained so that they reach their maximum useful life. The facility and equipment used in support of public transit at CyRide will be maintained at or above the specifications provided with the facility operations and equipment manuals. Permanent facility maintenance records shall be kept on a software program designed for the task when possible. Alternately, permanent records may be kept on spreadsheets, equipment maintenance log sheets, or other suitable means of recording periodic maintenance. Warranty periods will be closely tracked so that no public funds are expended on repairs for covered facilities or equipment.

### Appendix 1

# Facility and Equipment Preventive Maintenance Schedule

# **Facility and Equipment Maintenance Schedule**

Safety and Security			
Equipment	Inspection Interval	Performed By	
Fire Protection System	Weekly	CyRide	
Fire Protection System	Monthly	CyRide	
Exit and Emergency Lighting Inspection	Monthly	CyRide	
Fire Extinguishers Inspection	Monthly	CyRide	
Fire Extinguishers (Annual Inspection and Service)	Annual	Contractor	
Fire Panel & Monitoring System	Annual	Contractor	
Sprinkler System & Sprinkler Backflow Valve	Annual	Contractor	
CO2 and NO2 Gas Sensor Calibration	Annual	Contractor	
First Aid & Eye Wash Station Inspection	Every 4 Months	CyRide	

Facility		
Equipment	Inspection Interval	Performed By
Shelters Cleaned and Inspected	Biannual	CyRide
Parts Washer	Six Weeks	Contractor
Storage Area Pits	Biannual	CyRide
In-Ground Lifts	Quarterly	CyRide
Electromechanical Lifts	Quarterly	CyRide
Storage Tank and Spill Basin Inspection	Weekly	Cyride
Overhead Doors and Motors	Biannual	CyRide
Rooftop HVAC Units	Bimonthly	CyRide
Facility Backflow Valves	Annual	Contractor
Underground Storage Tanks	Every Two Years	Contractor
Building Roof	Biannual	CyRide
Building Exterior	Biannual	CyRide
Boilers	Annual	Contractor
Water Heaters and Circulation Pumps	Biannual	CyRide
Overhead Hoist	Annual	Contractor
Chains and Slings	Annual	CyRide
Ladders	Annual	CyRide
Bus Wash	Monthly	CyRide
Area Unit Heaters	Annual	CyRide
MultiStack Heat Pumps (2005 Addition)	Annual	Contractor
Office Heat Pumps – Filters & Line Water Screen Inspection	Bimonthly	CyRide
Elevator	Annual	Contractor
Flood Barriers	Annual	CyRide
Automatic Front Entrance Door Inspection	Weekly	CyRide

Building Air Compressor	Biannual	CyRide
Compressed Air Dryer	Biannual	CyRide
Wye Valve Backflush	Weekly	CyRide
Fuel Pumps	Monthly	CyRide
Elevator (sump, shaft, and light inspection)	Annual	CyRide

### Appendix 2

# Facility and Equipment Maintenance Procedures



FM Global Index Number: 6	88778.71	
Inspection for the week of		
•	(date)	

**Valves -** Visually check each sprinkler control valve listed below for the fully open and locked condition. All inside and outside valves controlling sprinklers or fire-protection water are listed.

	REA CONTROLLED	OPEN SHUT LOCKED
1 8" PIVA in grass outside door 14	All Sprinklers	
2 6" OS&Y (north), Bus Wash Mech Room	All Sprinklers	
3 6" OS&Y (south), Bus Wash Mech Room	All Sprinklers	
4 4" IBV outside west body shop man door	Body Shop Sprinklers	
5 8" PIVA outside of door 8 in sidewalk	Original Bld Sprinklers	
6 6" OS&Y (N), north end of lane 8	Original Bld Sprinklers	
7 6" OS&Y (S), north end of lane 8	Original Bld Sprinklers	
8 4" IBV, room 117, janitor's closet, admin	Admin Bld Sprinklers	
•	·	

Valve Key: PIVA = Post Indicator Valve Assembly

IBV's = Indicating Butterfly Valves OS&Y's = Outside Screw and Yolk

The FM Global *Red Tag Permit System* is used to guard against delayed reopening of valves. The Red Tag Permit should be used every time a sprinkler control valve is closed. When the valve is reopened, the 2" drain should be flowed wide-open to ensure there is no obstruction in the piping. The valve should then be relocked.

Yes No

Were any valves closed since the last inspection?
Were FM Global Red Tag Permits used?
Was the valve(s) reopened fully and a 2" drain test conducted before the valve(s) was relocked or resealed?

**Sprinklers - Piping - Hangers** Visually inspect sprinkler heads, piping, and hangers and note any defects below. Sprinkler heads need 18-36" clearance from obstructions.

Yes No

Are all sprinklers in good service condition?
Are all sprinklers free of obstructions?
Is all sprinkler piping in good condition?
Is sprinkler piping free of visible leaking?
Are all hangers and bracing in good condition and firmly attached?
Spot temperature checks read 40 degrees or more? (Nov - March)

Comments:

### CyRide FIRE PROTECTION INSPECTION FORM

FM Global Index Number: 68778.71

Inspection for the month of \_\_\_\_\_(month and year)

**Valves** - Physically try the post indicator valves and record the results. Do not report a valve open unless you have personally tried it. These valves are wide open if you feel a spring or torsion in the opening rod when you try turn it beyond the wide-open position. Do not rely on the indicator when it reads OPEN. Mechanical damage can falsely indicate a partly or completely closed valve is open.

Operation Satisfactory?

#### VALVE LOCATION AREA CONTROLLED YES NO LOCKED

1 8" PIVA in grass outside door 14 All Sprinklers 2 8" PIVA outside of door 8 in sidewalk Original Bld Sprinklers

**Sprinkler Alarms** - Notify the monitoring center and all other parties that could be affected by an alarm. Conduct a waterflow alarm test of each sprinkler zone.

INSPECTOR'S TEST SPRINKLER SATISFACTORY

CONNECTION LOCATION ZONE OPERATION? (Y/N) ALARM TIME

1 Lane 9, adjacent to pedestrian door NW Zone (lanes 9-13)

2 Lane 1, at center pedestrian door S & SW Zones 3 Lane 5, on wall between lanes 5 & 6 Original Building

4 Admin Bld, Room 117, Janitor's Closet Admin Bld

**Water Pressure** - Record water pressure on city (or supply side) of each riser. Record water pressure at inspector's test connection in administration building.

WATER PRESSURE GAUGE LOCATION SPRINKLER ZONE WATER PRESSURE

1 Bus wash mechanical room riser NW Zone (lanes 9-13)
2 Lane 8 Original Building
3 Admin Bld, Room 117, Janitor's Closet Admin Bld

**Fusible Link-Operated Fire Doors and Windows** - Visually inspect and manually operate fusible link operated fire doors and window screens. Follow manufacturers inspection steps.

#### **DOOR/WINDOW LOCATION**

#### SATISFACTORY OPERATION? (Y/N)

- 1 Lane 3 fire door
- 2 Meeting room 125 window fire curtain (lane 8, north window)
- 3 Lane 8, south curtain
- 4 Lane 7, west curtain
- 5 Lane 7, east curtain

#### Comments:

### Maintenance Procedure for Exit and Emergency Lighting Monthly

Check to see that all exit routes are clear and free from obstructions.

#### Exit Signs

- 1. Clean
- 2 .Make sure sign is securely fastened.

#### **Exit Lights**

- 1. Clean
- 2. Replace missing or nonfunctioning bulbs.
- 3. Test unit following manufacturer's instructions on fixture.

### **Emergency Lighting**

- 1. Clean
- 2. Replace missing or nonfunctioning bulbs.
- 3. Test unit following manufacturer's instructions on fixture.

### Fire Extinguisher Inspection Procedure Monthly

The monthly fire extinguisher inspection details the visual condition of the extinguisher.

- 1. Verify extinguisher is in the correct location.
- 2. Check seals and tamper indicators intact.
- 3. Check pressure gauges or indicators to verify they are in proper operating range and position.
- 4. Check labels and inspection signs.
- 5. Check hoses and nozzles.
- 6. Check hydrostatic test date. Hydrostatic testing must be completed every 5 years.
- 7. Path to the extinguisher is unobstructed.
- 8. Check date of service and verify that it is current.

#### First Aid & Eye Wash Station Inspection Every 4 Months

The eye wash and first aid cabinet are to be check every 4 months to make sure everything is working properly and none of the products have expired.

#### **Procedure**

#### Eye Wash

#### Locations

- Battery Room
- Lane 13
- Mobile Station in Shop

#### Wall Mounted

- Remove Cap and allow water to flow through system to flush any pipe buildup out.
- Clear a path to station

#### Mobile Unit

- Check water expiration tag; if water expires before next inspection, change water and add stabilizer.
- Make sure unit is clean and is in a visible spot in the shop
- Clear path to unit if there isn't already one.

#### First Aid

#### First Aid Cabinet

- Check all medication and supplies to make sure they haven't expired or will expire before the next inspection
- Order required supplies

### Bus Shelter Inspection Biannual (spring and fall)

Bus shelters are to be power washed and maintained twice yearly to the following standard.

- 1.0 General Approach
  - 1.1 Remove shopping carts from shelter area
  - 1.2 Empty trash can
  - 1.3 Sweep cobwebs from shelter
  - 1.4 Clean interior, exterior, and concrete using power washer
  - 1.5 Report vandalism of any kind
- 2.0 Windows
  - 2.1 Ads/papers taken down
  - 2.2 Scrape residue/etc. from windows
  - 2.3 Wash windows
  - 2.4 Clean ledges
  - 2.5 Clean window in front of schedule
  - 2.5 Replace missing or faded decals
  - 2.7 Report breaks, cracks & scratches
- 3.0 Benches
  - 3.1 Remove gum, mud, & etc. Anything stuck to aforementioned
  - 3.2 Dust
  - 3.3 Wash front & back
  - 3.4 Replace boards as needed
- 4.0 Floors/Pads
  - 4.1 Remove any gum missed by pressure washer
  - 4.2 Remove weeds
  - 4.3 Report any large cracks or uneven surfaces

#### Floor Pit Inspection Biannual

Floor pits are to be inspected biannually. Contents shall be removed and disposed of as necessary. Solids build-up in the bottom and/or odor will generally dictate timing of removal of contents. Disposal contractor must dispose of pit waste in a manner that meets all applicable regulations.

After contents have been removed, sides and bottom shall be cleaned and any defects in the grate, grate frame, or walls will be noted on the inspection form.

### Maintenance Procedure for In-Ground Lifts Quarterly

- 1.0 Follow energy control specific procedures outlined in Lockout/Tagout Manual.
- 2.0 Check for air leaks.
- 3.0 Check for oil leaks.
  - 3.1 Pump
  - 3.2 Lines
- 4.0 Track Plate and Lift Platforms
  - 4.1 Check for damaged track plate sections.
  - 4.2 Check for proper track plate movement.
  - 4.3 Clean track and trench area.
  - 4.4 Check to ensure lift platform is secured to post properly.
  - 4.5 Check lift platform for damage or wear.
  - 4.6 Check all bolts to ensure they are properly secured.
  - 4.7 Check for excessive play in lift platform track.
  - 4.8 Check lift platform extension for proper operation.
- 5.0 Check Lift Posts
  - 5.1 Scoring and/or burns
  - 5.2 Oil leaks
  - 5.3 Lift locks
    - 5.3.1 Locks and unlocks properly
    - 5.3.2 Lube locking device
- 6.0 Check Lift Controls
  - 6.1 Check lift controls for proper operation and excessive wear.

### Maintenance Procedure for Electromechanical Lifts BiMonthly

- 1.0 Follow energy control specific procedures outlined in Lockout/Tagout Manual.
- 2.0 Semi Auto Lube System
  - 2.1 Check lifting screw to ensure receiving ample lubrication
- 3.0 Lube Cup Maintenance
  - 3.1 Every 12 months disassemble and clean lube cup assembly.
  - 3.2 Reassemble and fill lube cup to the red line.
- 4.0 Lifting Nut and Screw
  - 4.1 Clearance between the bronze lifting nut and the steel safety nut is 4 mm or .15 inches. When you can no longer insert a 2mm feeler gauge between the two they must be replaced as a matched set.
  - 4.2 Check lifting screw.
- 5.0 Reducer and Driving Gear
  - 5.1 Periodically grease chain and pinions.
  - 5.2 Check that chain is properly tight. Stretch it if needed by means of the 4 tension screws.
- 6.0 Control Screw
  - 6.1 Check greasing of the screw.
  - 6.2 Fill the semi-automatic lubricator on the left side of the carriage.
- 7.0 Mobile Carriage Rollers
  - 7.1 Bearing are greased for life and need no maintenance.
- 8.0 Reducer Support Thrust Bearing (front side of the column)
  - 8.1 Give 3 to 4 pump thrusts a year (with screw turning).
- 9.0 Electrical Equipment
  - 9.1 Check cables.
  - 9.2 Check plugs.
  - 9.3 Check limit switches (rollers and micro-contacts).
  - 9.4 Check the motion controller.
- 10.0 Bronze Nut (inspection hole is provided for this purpose in the lower part of the column)
  - 10.1 Check bronze nut for wear and tear.
  - 10.2 Check screw for wear and tear
  - 10.3 Check the detector of wearing out of the nut.

### Storage Tank & Fuel Dispenser Spill Basin Inspection Procedure Weekly

The monthly storage tank and fuel dispenser spill basin inspection details a visual inspection of the spill basin areas surrounding the underground storage tank fill ports. Similarly, the spill basins under the fuel dispensers and in the bulk flammable liquid storage area are inspected.

- 1. Check for current DNR tags on underground tanks.
- 2. Remove and properly dispose of liquid/debris in containment areas.

### Maintenance Procedure for Overhead Doors/Motors Biannual

- 1.0 Follow energy control specific procedures outlined in Lockout/Tagout Manual.
- 2.0 Check for proper operation.
  - 2.1 Buttons on door controller.
  - 2.2 Door opens, closes, and stops when buttons are activated.
- 3.0 Check for damaged door panels.
  - 3.1 Check for damaged sections.
  - 3.2 Check rails for wear and mounting to ceiling and walls.
  - 3.3 Guide rollers
    - 3.3.1 Check for damaged rollers.
    - 3.3.2 Check for missing rollers.
    - 3.3.3 Check to ensure rollers are secured.

#### 4.0 Rail

4.1 Check for damage or wear.

#### 5.0 Motor

- 5.1 Motor mounted securely.
- 5.2 Pulleys mounted securely.
- 5.3 Gears are secure.
- 5.4 Check for clutch slippage.
- 5.5 Check gear sprocket on motor.
- 5.6 Check motor reset button.
- 5.7 Check for exposed or damaged wires.
- 5.8 Electrical cover secure.
- 6.0 Check Door Springs/Shaft/Pulley
  - 6.1 Springs.
    - 6.1.1 Check for cracks.
    - 6.1.2 Check mounting and alignment.
  - 6.2 Spring shaft.
    - 6.2.1 Check for damage or wear.
    - 6.2.2 Securely mounted to wall.
  - 6.3 Spring staff pulley
    - 6.3.1 Securely mounted.
    - 6.3.2 Check for damage and wear.

#### 7.0 Lubrication

7.1 Rollers 7.5 Guide rails

7.2 Chains 7.6 Spring shaft pulley 7.3 Springs 7.7 Motor shaft bearing 7.8 Motor gear chain

### Maintenance Procedure for Rooftop HVAC Units Bimonthly

- 1.0 Follow energy control specific procedures outlined in Lockout/Tagout Manual.
- 2.0 Filters
  - 2.1 Check and replace as needed
- 3.0 Blower fan/motor
  - 3.1 Check for proper operation
  - 3.2 Lube as applicable
  - 3.3 Check belts (adjust or replace as necessary)
- 4.0 Check burner operation (if applicable).
- 5.0 Check heat exchanger.
- 6.0 Clean Vanes on lane 13 units
- 7.0 Check refrigerant if applicable.
- 8.0 Clean

### Facility Roof Inspection Biannual (spring and fall)

- 1. Visually inspect the roof for the following conditions:
  - 1.1 Debris
  - 1.2 Drainage
  - 1.3 Physical damage
  - 1.4 Structural deformation
- 2. Flat/Membrane Roof Area
  - 2.1 Condition of coating or membrane
  - 2.2 Aggregate loss
  - 2.3 Punctures
  - 2.4 Cracks (Alligatoring)
  - 2.5 Blisters (Fishmouths)
  - 2.6 Ponding.
- 3. Inspect roof features for visible signs of damage
  - 3.1 Fascia
  - 3.2 Soffit
  - 3.3 Flashing
  - 3.4 Gutters/Drains
  - 3.5 Skylights
  - 3.6 Vents
  - 3.7 Access door
  - 3.8 Vents

### Facility Exterior Inspection Biannual (spring and fall)

- 1. Building address clearly visible.
- 2. Fire department Knox Box unobstructed.
- 3. Exterior wall condition new cracks or other damages
- 4. Windows free from cracks and broken panes
- 5. Stairs, landings and handrails in good repair and fastened securely
- 6. Irrigation covers in place
- 7. Exterior lights
- 8. Parking lot

### Maintenance Procedure for Water Heaters and Circulating Pumps Biannual (spring and fall)

- 1. Follow energy control specific procedures outlined in Lockout/Tagout Manual.
- 2. Check exterior condition of tank and piping.
- 3. Drain specified amount of water from tank if applicable.
- 4. Lubricate nearby circulating pump.

### Chains and Slings Inspection Procedures Annual

If any of the identification items are missing or any of the listed damage criteria are met the chain, sling, or rope must be destroyed.

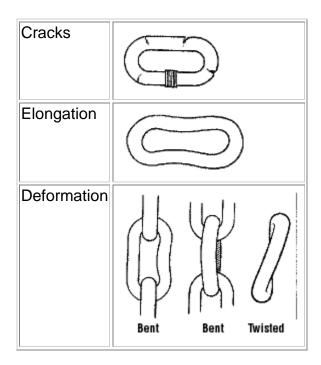
#### 1.0 Identification

The tag identifies size, reach, working load limit (WLL), serial number, manufacturer's name or symbol, and sling type (number of legs).

- 2.0 Clean chain and hang vertically for damage inspection
  - 2.1 Measure reach accurately (bearing point of master ring to bearing point of hook). Check this length against the reach shown on tag. If present length is greater than that shown on tag, there is a possibility that the sling has been subjected to overloading or excessive wear.



- 2.2 Make a link-by-link inspection of the chain slings for:
  - 2.2.1 Excessive wear If the wear on any portion of any link exceeds the allowable wear of a link (Check with the chain manufacturer for wear specifications), immediately remove from service.
  - 2.2.2 Twisted, bent, gouged, nicked, worn, or elongated links.
  - 2.2.3 Cracks in the weld area of any portion of the link. Transverse markings are the most dangerous.
  - 2.2.4 Severe corrosion.



#### 2.3 Check Links and Hooks links for:

- 2.3.1 **Deformation** . Any bending or twisting exceeding 10 degrees from the plane of the unbent hook, unless otherwise directed by the hook manufacturer.
- 2.3.2 **Throat Opening** . Any distortion causing an increase in throat opening exceeding 15 percent or as otherwise directed by the hook manufacturer.
- 2.3.3 **Wear** . Any wear exceeding 10 percent of the original section dimension of the hook or its load pin or as otherwise directed by the hook manufacturer.
- 2.3.4 Cracks . Any visible crack.

### Ladder Inspection Procedures Annual

- 1. Side rails free from cracks, dents, bends, or blemishes.
- 2. Rung and steps are tight and rotation free.
- 3. Fasteners Rivets, nuts, bolts all tight.
- 4. Feet Check for wear and loose rivets.

### Bus Wash Maintenance Procedures Monthly

- 1. Follow energy control specific procedures outlined in Lockout/Tagout Manual.
- 2. Check for leaks.
  - 2.1 Supply
  - 2.2 Wash tank and lines
  - 2.3 Water soap mix lines
  - 2.4 Rinse
- 3. Bearings
  - 3.1 Check
  - 3.2 Lube bearings
- 4. Guide rails and framework.
  - 4.1 Securely fastened
  - 4.2 Check for cracks
  - 4.3 Check brackets
  - 4.4 Lube all zerk fittings.
- 5. Nozzles/ Check Valves
  - 5.1 Clean Clogged Nozzles
  - 5.2 Clean/replace leaking check valves
- 6. Wash Pumps
  - 6.1 Lube zerk fittings on both pumps
  - 6.2 Empty any solids from collection container
  - 6.3 Clean inside of wash reservoir

### Unit Heater Inspection Annual

- 1. Follow energy control specific procedures outlined in Lockout/Tagout Manual.
- 2. Thoroughly clean heater using building air.
- 3. Check fan and lubricate as necessary.
- 4. Verify thermostat settings are correct for area.

### Office Heat Pump Maintenance Procedure Bimonthly

- 1. Follow energy control specific procedures outlined in Lockout/Tagout Manual.
- 2. Air Filters
  - 2.1 Check and replace as needed
- 3. Blower fan/motor
  - 3.1. Check for proper operation
  - 3.2. Lube as applicable
- 4. Clean
  - 4.1. Check water line screens and clean as needed
  - 4.2. Clean unit exteriors

### Flood Barrier Inspection Procedure Annual

- 1. Check condition and seals on flood barrier panels.
- 2. Verify barrier hardware is stored with panels.
- 3. Verify tools in flood installation toolkit.
- 4. Verify installation instructions are present in toolkit.

### Automatic Front Entrance Door Inspection Procedure Weekly

The weekly automatic front entrance door inspection details a visual and operational inspection of the door to ensure that the building is accessible to persons with disabilities.

- 1. Check condition of glass and decals
- 2. Handles operate properly
- 3. Inspect door pivots
- 4. Buttons operational
- 5. Appropriate door speed

### Building Air Compressor Inspection Biannual

#### **MACHINE DATA:**

CHAMPION PL-70A 2-STAGE PRESSURE LUBRICATED DUAL

COMPRESSOR UNIT

MODEL: HPL20D-12 175PSI

SN#: PL70 490

2 EA MODEL PL-70A COMPRESSOR PUMPS

OIL CAPACITY: 6 1/3 QUARTS OF R& O ISO 100 OIL PER UNIT OIL FILTER: 1 EA #P10066A PER UNIT (SPIN-ON DISPOSABLE)

AIR FILTER: 2 EA # P05051A PER UNIT (CLEANABLE)

2 EA 20 HP 200/208V 3PH MOTORS

V-VELTS: 3 EA # B-100 PER UNIT

AUTOMATIC ELECTRIC DRAIN VALVE: SPEEDAIRE # 6Z948B

#### INSPECTION/MAINTENANCE PROCEDURES:

- 1. CHECK UNIT AND RECORD ANY UNUSUAL BEARING NOISE, VIBRATION, ODOR, CORROSION, AND STRUCTURAL DAMAGE.
- USE PROPER PPE: EAR PROTECTION, SIGHT PROTECTION, AND BURN PROTECTION.
- 3. FOLLOWING APPROPRIATE LOCKOUT/TAGOUT PROCEDURES AND ARC FLASH PROTECTION PROCEDURES, TURN UNIT OFF AT POWER DISCONNECT, ISOLATE UNIT FROM BUILDING AIR LINE SYSTEM BY CLOSING VALVE, LOWER TANK AIR PRESSURE TO APPROXIMATELY 25 PSI WITH MANUAL TANK DRAIN VALVE.
- 4. CHECK ELECTRICAL CONNECTIONS, INSPECT FOR AND REPAIR DAMAGED WIRING ON MOTOR CONTROL DEVICES AS NEEDED.
- 5. CLEAN OR REPLACE SUCTION AIR FILTERS AS NEEDED.
- 6. MANUALLY DRAIN CONDENSATE LINE AND CHECK OPERATION OF AUTOMATIC DRAIN VALVE.
- 7. REPLACE COMPRESSOR CRANKCASE OIL AND FILTERS.
- 8. CLEAN DRIVE MOTOR AIR VENTS.
- 9. REMOVE BELT GUARDS.
- 10. GREASE MOTOR BEARINGS. ONE PUMP OF NLG-2 GREASE EACH.
- 11. INSPECT MOTOR AND SHAFT PULLEYS FOR WEAR AND ALIGNMENT.
- 12. INSPECT BELT CONDITION, REPLACE OR ADJUST TENSION AS NEEDED.
- 13. PULL RINGS ON PRESSURE RELIEF VALVES TO VERIFY OPERATION.
- 14. REPLACE AND SECURE BELT GUARDS.
- 15. CLEAN GREASE AND DEBRIS FROM UNIT AND AREA.

- 16. TURN POWER BACK ON AT DISCONNECT FOLLOWING ARC FLASH PROTECTION PROCEDURES.
- 17. CHECK COMPRESSOR CUT IN (140PSI) AND CUT OUT (175 PSI) PRESSURES.
- 18. SLOWLY OPEN VALVE TO BUILDING AIR SUPPLY PIPE.
- 19. INSPECT ALL EXPOSED SUPPLY PIPING FOR LEAKS AND MOUNTING.

### SHOP COMPRESSED AIR DRYER INSPECTION AND MAINTENANCE BIANNUAL

AIR COOLED REFRIGERATED COMPRESSED AIR DRYER LOCATED IN AIR COMPRESSOR EQUIPMENT ROOM.

#### **MACHINE DATA:**

CHAMPION MODEL # 150CCDA200 SERIAL # 130322 M298 REFRIGERANT R-22, 2LB 1 OZ 230V, 1PH, 60HZ, ½ HP, 6.4A

#### **INSPECTION / MAINTENANCE PROCEDURES:**

- 1. CHECK UNIT AND RECORD ANY UNUSUAL NOISE, VIBRATION, ODOR, CORROSION, AND STRUCTURAL DAMAGE. CHECK THREE GAUGES ON THE FRONT OF THE MACHINE. GAUGES SHOULD INDICATE AS SHOWN ON THE AJACENT LABELS.
- 2. USE PROPER PPE: EAR, EYE PROTECTION.
- 3. FOLLOWING PROPER LOCKOUT/TAGOUT PROCEDURES AND ARC FLASH PROTECTION PROCEDURES, TURN UNIT POWER OFF AT POWER DISCONNECT (PANEL P-2, CB 13,15,17).
- 4. REMOVE, CLEAN, AND REPLACE FILTER FOR FIN TUBES ON REAR OF UNIT. INSPECT FOR BENT OR DIRTY FINS. STRAIGHTEN AND CLEAN AS REQUIRED.
- 5. REMOVE FRONT LOWER PANEL. INSPECT CABINET INTERIOR FOR LEAKS AND DIRT. VACUUM INSIDE IF NEEDED. LUBE THE FAN MOTOR VIA THE TWO OIL PORTS WITH 2 DROPS OF LIGHT MACHINE OIL PER PORT.
- 6. REPLACE FRONT PANEL. CLEAN OUTSIDE SURFACES OF MACHINE AND MACHINE AREA AS NECESSARY.
- 7. TURN UNIT BACK ON AT POWER DISCONNECT USING PROPER ARC FLACH PROTECTION PROCEDURES.
- VERIFY OPERATION OF THE AUTOMATIC CONDENSATE DRAIN BY LISTENING FOR DISCHARGE OF AIR PRESSURE AS MACHINE IS POWERED BACK UP.

### Wye Valve Back-flush Procedure Weekly

The wye valve is mounted overhead in the old bus wash area. It serves as the primary sediment screen for cooling tower water that is circulated throughout the building as a thermal heating and cooling source.

- 1. Unlock valve lockout cover.
- 2. Open back-flush valve and allow water to flow to floor drain for approximately 30 seconds or until water is clear.
- 3. Close valve and lock.

### Fuel Pump Inspection Procedure Monthly

The monthly fuel pump inspection details a visual and operational inspection of the fuel pumps in lane 13.

- 1. Visually inspect fuel pumps and clean as needed
- 2. Replace fuel filters as necessary

### Elevator Inspection Procedure Annual

The annual elevator inspection covers the items not covered by the elevator contractor's maintenance agreement. Namely the operation of the elevator shaft sump pump, light, and cleaning of the shaft.

- 1. Follow energy control specific procedures outlined in Lockout/Tagout Manual.
- 2. Follow energy control specific procedures outlined in building elevator manual.
- 3. Raise elevator and lockout on second floor.
- 4. Use elevator key and open first floor doors.
- 5. Using appropriate ladder, descend into elevator shaft.
- 6. Verify shaft light and sump pump are in working condition.
- 7. Visually inspect elevator shaft walls and floor. Note any defects.
- 8. Clean floor and wall areas as necessary.