

Hanna Daily Preventive Maintenance Schedule

Location _____ Location # _____

Daily operation and inspection procedures to be performed by car wash personnel.

Mark status in the spaces on the right after performing inspection: Yes or No

Hanna Conveyorized System

| Start-up or Shift Change | Su | Mo | Tu | We | Th | Fr | Sa |
|--|----|----|----|----|----|----|----|
| 1. Check Correlator for smooth side-to-side movement. | | | | | | | |
| 2. Check approach roll bars for free-rolling movement. | | | | | | | |
| 3. Wash a test car each morning before washing customers' vehicles. Check all equipment and functions for proper operation. | | | | | | | |
| 4. Check entrance control console. Notify Hanna provider, if necessary. | | | | | | | |
| 5. Perform walk-through inspection, looking for equipment damage or any safety hazards. If found, notify Hanna service provider. | | | | | | | |
| 6. Drain condensation from air line filters, such as roller raiser control and dryer. | | | | | | | |
| 7. Ensure floors are free of debris. | | | | | | | |
| 8. Ensure that entrance and exit curtains are clean and in good repair. | | | | | | | |
| 9. Listen for any unusual noises in the equipment. If found, notify Hanna service provider. | | | | | | | |
| 10. Check for liquid leaks (chemical pumps and hydraulics). If found, notify Hanna service provider. | | | | | | | |
| 11. Check for equipment damage or any safety hazards. If found, notify Hanna service provider. | | | | | | | |
| 12. Drain condensation from the air compressor tanks, chemical pumps, station and master trio. | | | | | | | |
| 13. Check hydraulic pressure gauge. If over 900psi, notify Hanna service provider. | | | | | | | |
| 14. Check fire extinguishers. | | | | | | | |

Comments:

Signature

Date

Time

Hanna Weekly Preventive Maintenance Schedule

Location _____ Location # _____ Week# _____

Mark status in the spaces on the right after performing inspection: OK or Service Required

Hanna Conveyorized System

| | Status | Comments or Action Taken |
|---|--------|--------------------------|
| Correlator | | |
| 1. Ensure top plate moves freely both ways. | | |
| 2. Ensure guide rails move freely. | | |
| 3. Ensure that springs are in good repair. | | |
| 4. Ensure bearings are in good repair. | | |
| 5. Check that rollers are in good repair. | | |
| 6. Ensure that shaft is in good repair. | | |
| 7. Lubricate bearings (if applicable). | | |

Conveyor

| | | |
|--|--|--|
| 1. Grease take-up sprocket shaft bearings. Check for wear. | | |
| 2. Check drive motor and gearbox area for leaks. Repair if found. | | |
| 3. Check pusher rollers and outrigger wheels for free roll. | | |
| 4. Spray lube on all limit switch heads and roller arms, rod ends, cylinder clevises, and roller up ramp axle. | | |
| 5. Check for correct chain tension. | | |
| 6. Check for chain wear. | | |
| 7. Check for wear on cotter pins. | | |
| 8. Adjust roller-up forks to specifications. | | |
| 9. Ensure air pressure is adjusted to specifications. | | |
| 10. Check oil level in roller raiser oiler. | | |
| 11. Ensure entrance and exit trap doors are functioning. | | |
| 12. Ensure roller cancel switch is functioning. | | |
| 13. Ensure guide rails and welds are in good repair. | | |
| 14. Check conveyor speed. Adjust to operating standards. | | |
| 15. Check for unusual noises. | | |

Flashing Signs

| | | |
|--|--|--|
| 1. Check for proper operation. Replace burned out light bulbs. | | |
|--|--|--|

Soap Foamer/Pre-Rinse and Final Rinse/Drying Aid Arches

| | | |
|---|--|--|
| 1. Check for air leaks. Repair if found. | | |
| 2. Check for liquid leaks. Repair if found. | | |

(Hanna Weekly Preventive Maintenance Schedule Continued)

Hanna ConveyORIZED System

| | Status | Comments or Action Taken |
|--|--------|--------------------------|
|--|--------|--------------------------|

Soap Foamer/Pre-Rinse and Final Rinse/Drying Aid Arches

| | | |
|---|--|--|
| 3. Drain condensation from air line filters. | | |
| 4. Check spray nozzles for blockage and proper spray pattern. Replace nozzles if worn | | |
| 5. Ensure actuators are operating properly. | | |
| 6. Ensure air pressure is set to specifications. | | |
| 7. Ensure foamer is functioning properly. | | |
| 8. Check chemical and detergent levels. | | |

Mitters — Fore and Aft/Side to Side

| | | |
|--|--|--|
| 1. Check for water and oil leaks. Repair if found. | | |
| 2. Check gearbox oil level. Refill if needed. | | |
| 3. Check spray nozzles for blockages and spray pattern. | | |
| 4. Check rod arms and jack shaft bearings for proper alignment and hardware tightness. | | |
| 5. Ensure that curtain RPM speed is correct per operational manual. | | |
| 6. Ensure curtains are in good condition. | | |
| 7. Ensure basket movements are smooth. | | |
| 8. Lubricate bearings. | | |
| 9. Check bearings and bushings for wear. | | |
| 10. Check for unusual noises. | | |

Hub Cap Rocker Panel Brushes/Side Window Washers

| | | |
|---|--|--|
| 1. Check for hydraulic oil leaks. Repair if found. | | |
| 2. Check for proper rotation. | | |
| 3. Ensure brush RPM speed is set per manual. | | |
| 4. Check for wear on brushes and bearings. | | |
| 5. Lubricate bearings. | | |
| 6. Check for proper brush penetration. | | |
| 7. Ensure stabilizer shocks are functioning properly. | | |
| 8. Ensure couplings and flanges are tight. | | |
| 9. Check for proper water application. | | |

(Hanna Weekly Preventive Maintenance Schedule Continued)

Hanna Conveyorized System

| | Status | Comments or Action Taken |
|--|--------|--------------------------|
|--|--------|--------------------------|

Tire Washers

| | | |
|---|--|--|
| 1. Check motor to brush shaft coupler for tightness. | | |
| 2. Check for liquid leaks. Repair if found. | | |
| 3. Check for free roll of approach rollers. Replace if required. | | |
| 4. Check for excessive brush wear and shaft trueness. Replace if necessary. | | |
| 5. Check for proper brush height and penetration. | | |
| 6. Ensure base plates are level and fastened securely. | | |
| 7. Ensure tire washer arms are moving freely. | | |
| 8. Ensure spring tension is set to specifications. | | |
| 9. Ensure tire washers are at proper brush rotation. | | |
| 10. Ensure brush speed is set RPM speed per operational manual. | | |
| 11. Check bearings for wear and lubrication. | | |
| 12. Ensure stabilizer shocks are functioning properly. | | |

Chemical Tire Applicators

| | | |
|--|--|--|
| 1. Check spring operation for proper treadle return. | | |
| 2. Check pinch tube for cuts. | | |
| 3. Spray lube treadle hinges. | | |
| 4. Replace worn spray nozzles. | | |
| 5. Check for liquid leaks. Repair if found. | | |

Underwash and Undercarriage Applicators

| | | |
|---|--|--|
| 1. Replace worn spray nozzles. | | |
| 2. Check for liquid leaks. Repair if found. | | |

Wraparound Brushes

| | | |
|---|--|--|
| 1. Check for hydraulic oil leaks. Repair if found. | | |
| 2. Check spray nozzles for blockages and spray pattern. | | |
| 3. Grease shaft and bearings. Three shots of grease in each bearing only (when applicable). | | |
| 4. Ensure brush RPM speed is set correct as per operational manual. | | |
| 5. Check stabilizer shocks for movement and function. | | |

(Hanna Weekly Preventive Maintenance Schedule Continued)

Hanna ConveyORIZED System

| | Status | Comments or Action Taken |
|--|--------|--------------------------|
|--|--------|--------------------------|

Wraparound Brushes (continued)

| | | |
|--|--|--|
| 1. Check for proper cloth penetration. | | |
| 2. Check for worn cloth and bearings. | | |
| 3. Ensure couplings and flanges are tight. | | |
| 4. Ensure that hubs are holding tight on door shaft. | | |

Air Dryer

| | | |
|---|--|--|
| 1. Clear any trash from producer intake screens. | | |
| 2. Ensure motors are protected from direct water. | | |
| 3. Check air dryer anchorage to floor. | | |
| 4. Check quick clamps. | | |
| 5. Check nozzles for loose connections or bolts. | | |

Unattended Control Console and On-Board Digital Control System

| | | |
|---|--|--|
| 1. Check that cash and coin acceptors are in working order. | | |
| 2. Ensure that the entrance controller is clean and in working order. | | |
| 3. Ensure that card readers are in working order and sufficient receipt paper is available. | | |

Miscellaneous Upkeep

| | | |
|--|--|--|
| 1. Wash down the tunnel walls, equipment, floors, catch basins, and conveyor track with high-pressure detail guns. | | |
| 2. Ensure that inside and outside lighting is in working order. | | |
| 3. Check fire extinguishers. | | |

Air Compressor

| | | |
|---|--|--|
| 1. Check oil level in crankcase. Refill if necessary. | | |
| 2. Check drive belts for wear, cuts and tightness. | | |
| 3. Check operation of high and low pressure switch. | | |
| 4. Check operation of safety relief valve. | | |
| 5. Drain condensation from tanks. | | |

(Hanna Weekly Preventive Maintenance Schedule Continued)

Car Wash Equipment Room

| | Status | Comments or Action Taken |
|--|--------|--------------------------|
|--|--------|--------------------------|

Chemical Feed Unit

| | | |
|--|--|--|
| 1. Ensure pumps and feed systems are functioning properly. | | |
| 2. Ensure air and water pressure is set at correct psi. | | |
| 3. Ensure all fittings and lines are in good repair. | | |
| 4. Ensure all intake lines are free from kinks. | | |
| 5. Check hydrominders for positive on/off operation and hydrominder tips are in place. | | |
| 6. Ensure that there is an appropriate supply of detergents, chemicals and other cleaning agents required for proper operation of equipment. | | |

Common Air System

| | | |
|---|--|--|
| 1. Check for excessive water in air system lines. | | |
| 2. Ensure normal pressure is set at 120 psi. | | |
| 3. Check for air leaks. Repair if found. | | |
| 4. Approved "EP" hydraulic oil used. | | |

Vacuum Cleaners

| | | |
|--|--|--|
| 1. Ensure vacuum hoses and nozzles are complete and in good working order. | | |
| 2. Ensure that coin acceptors are in good working order. | | |
| 3. Check lights and replace bulbs if necessary. | | |

Reclaim System

| | | |
|--|--|--|
| 1. Check for water and oil leaks. Repair if found. | | |
| 2. Check supply water shutoff control. | | |
| 3. Inspect pump drive belts for cuts, wear and tightness. | | |
| 4. Add three drops of pump oil to each of the three pump pistons (if oiler-type pump). | | |
| 5. Ensure pump is in good repair. | | |
| 6. Ensure couplings are in good repair. | | |
| 7. Ensure suction/discharge line piping is in good repair. | | |

(Hanna Weekly Preventive Maintenance Schedule Continued)

Car Wash Equipment Room

| | Status | Comments or Action Taken |
|--|--------|--------------------------|
|--|--------|--------------------------|

Reclaim System (continued)

| | | |
|---|--|--|
| 8. Check for excessive sediment in pit. | | |
| 9. Ensure pits are free of oil and floating debris. | | |
| 10. Ensure relief bypass valve is working properly. | | |
| 11. Ensure barrel screen and foot valve is clean. | | |

Hydraulic Power System

| | | |
|--|--|--|
| 1. Check for hydraulic oil leaks. Repair if found. | | |
| 2. Check for proper operation of low-level shutoff switch. | | |
| 3. Check for proper operation of pressure-relief valves. | | |
| 4. Check for proper operation of speed control (flow-control valve). | | |
| 5. Check oil for contaminants. Replace filter twice a year. | | |
| 6. Ensure hoses and lines are in good repair. | | |
| 7. Ensure oil level is at proper level. | | |

Water Softener System

| | | |
|--|--|--|
| <ul style="list-style-type: none"> Check water softener operation and check for hardness. | | |
|--|--|--|

Comments:

Signature

Date

Time

Hanna Monthly Preventive Maintenance Status

Location _____ Location # _____ Week# _____

Mark status in the spaces on the right after performing inspection: OK or Service Required

Hanna ConveyORIZED System

| Status | |
|--------|--|
|--------|--|

Mitters

| | |
|---|--|
| • Check gearbox crank arms for tightness. | |
|---|--|

Reclaim System

| | |
|---|--|
| • Check oil level in pump crankcase. Refill if low. | |
|---|--|

Comments:

Car Wash Equipment Room

| Status | |
|--------|--|
|--------|--|

All Hydraulic Power Packs

| | |
|---|--|
| • Run through complete speed range by adjusting flow control valve. | |
|---|--|

High Pressure Pump

| | |
|-------------------------------------|--|
| • Check all hardware for tightness. | |
|-------------------------------------|--|

Fire Extinguishers

| | |
|--|--|
| • Check and service per manufacturer's instructions. | |
|--|--|

Comments:

Signature

Date

Time

Hanna Semi-Annual Preventive Maintenance Report

Location _____ Location # _____ Week# _____

Mark status in the spaces on the right after performing inspection: OK or Service Required

Hanna Conveyorized System

| | First Maintenance Visit | Second Maintenance Visit |
|--|-------------------------|--------------------------|
| Mitters | | |
| • Drain, flush and refill gearbox oil. | | |
| Air Dryer | | |
| • Grease electric motor bearings. | | |
| Conveyor | | |
| • Clean conveyor pit of all dirt and debris. | | |
| Reclaim | | |
| • Clean reclaim pit of all dirt and debris. | | |

Comments:

Car Wash Equipment Room

| | First Maintenance Visit | Second Maintenance Visit |
|--|-------------------------|--------------------------|
| All Hydraulic Power Packs | | |
| • Drain, flush and refill hydraulic fluid if needed. | | |
| High-Pressure Pump | | |
| • Grease electric motor bearings. | | |
| • Drain, flush and refill pump crankcases. | | |
| Fire Extinguishers | | |
| • Check and service as per manufacturer's instructions. | | |
| OSHA Regulations | | |
| • Check for compliance with OSHA regulations. (Note all deficiencies in comments section below.) | | |

Comments:

Signature

Date

Time

Hanna Daily Preventive Maintenance Schedule

Location _____ Location # _____

Daily operation and inspection procedures to be performed by car wash personnel.

Mark status in the spaces on the right after performing inspection: Yes or No

Hanna Rollover Friction Wash System

| Start-up or Shift Change | Su | Mo | Tu | We | Th | Fr | Sa |
|---|----|----|----|----|----|----|----|
| 1. Check rollover to ensure it cycles properly. | | | | | | | |
| 2. Check entrance console code. Notify Hanna service provider if necessary. | | | | | | | |
| 3. Wash a test car each morning before washing customer's vehicles. Check all equipment and functions for proper operation. | | | | | | | |
| 4. Walk through inspection, looking for equipment damage or any safety hazards. If found, notify Hanna service provider. | | | | | | | |
| 5. Drain condensation from air line filters as specified. | | | | | | | |
| 6. Ensure floors are free of debris. | | | | | | | |
| 7. Ensure that entrance and exit curtains are clean and in good repair. | | | | | | | |
| 8. For cloth rollover — check all brush material for wear or damage. | | | | | | | |
| 9. Listen for any unusual noises in the equipment. If found, notify Hanna service provider. | | | | | | | |
| 10. Check for liquid leaks (chemical pumps and hydraulics). If found, notify Hanna service provider. | | | | | | | |
| 11. Check for equipment damage or any safety hazards. If found, notify Hanna service provider. | | | | | | | |
| 12. Drain condensation from the air compressor tanks, chemical pumps, station and master trio. | | | | | | | |
| 13. Check pressure gauge. If over 900psi, notify Hanna service provider. | | | | | | | |
| 14. Check fire extinguishers. | | | | | | | |
| 15. Fill chemical tanks on board. | | | | | | | |
| 16. Ensure treadle is working properly. | | | | | | | |

Comments:

Signature _____

Date _____

Time _____

Hanna Weekly Preventive Maintenance Report

Location _____ Location # _____ Week# _____

Mark status in the spaces on the right after performing inspection: OK or Service Required

Hanna Rollover Friction Wash System

| | Status | Comments or Action Taken |
|--|--------|--------------------------|
| 1. Check operations of rollover cycle, console code box and console. Make necessary adjustments and/or recommended repairs. | | |
| 2. Clean fittings, inspect and grease the following: wheel bearings and drive chains, side brush arms and shaft bearings, top mitter and shaft bearings, and boom arm mountings. | | |
| 3. Check boom assembly and make sure it is unobstructed. | | |
| 4. Check fluid level in hydraulic reservoir. Change filter twice a year. | | |
| 5. Inspect air cylinders for leakage and mounting alignment. | | |
| 6. Verify operation of proximity, limit and mercury switches. | | |
| 7. Drain water from air compressor holding tank. Set regulator. | | |
| 8. Bleed down and reset all air regulators on rollover. Adjust for proper operation. | | |
| 9. Check operation of chemical system. Clean if necessary. | | |
| 10. Inspect air, water and electrical lines for wear and secure connections. Replace when necessary. | | |
| 11. Inspect wiring in console box, junction box and Motor Control Center for loose connections or ground shorts. | | |
| 12. Inspect all relay contactors and verify operation of timing circuits. | | |
| 13. Inspect Motor Control Center box for moisture leaks. | | |
| 14. Check all spray nozzles for obstructions. Clean if required. | | |
| 15. Check all set screws in bearings and couplers. Inspect coupler spiders for wear. Repair if necessary. | | |
| 16. Inspect solenoids and manifolds for leaks. Clean if necessary. | | |
| 17. Refill chemical containers and keep at appropriate levels. | | |

(Hanna Weekly Preventive Maintenance Report Continued)

Hanna Rollover Friction Wash System

| | Status | Comments or Action Taken |
|--|--------|--------------------------|
| 1. Inspect track for alignment, weld-cracks, or loose bolts. Repair if necessary. | | |
| 2. Inspect washers for wear and cleanliness. | | |
| 3. Check operation of floor treadle. | | |
| 4. Check operation of instruction sign. Replace bulbs if required. | | |
| 5. Check operation of vacuum(s). Repair if necessary. | | |
| 6. Check fire extinguishers. | | |
| 7. Check for compliance with OSHA regulations. (Note all deficiencies in comment section below.) | | |

Comments:

Signature

Date

Time