

Draft

Dhaka Water Supply and Sewerage Authority
Financial and Capacity Building Consultancy
of
Dhaka Water Supply Sector Development Project

Maintenance Manual

Volume – 3

Pagla Sewage Treatment Plant

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*Schedule of maintenance activities are to assist the maintenance personnel
of Dhaka WASA to conduct maintenance programs at definite intervals*



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Instructions

Test results and maintenance activities carried out under monthly, quarterly, half yearly, yearly, and every two year must be recorded on the Job card, signed and dated by the maintenance supervisor. Date for the next activity must also be recorded on the Job card, which should be kept at the plant/equipment site and a copy with the maintenance personnel for follow up.

Ensure that all standard instructions of the manufacturer have been followed during every schedule of activity.

The personnel carrying out the maintenance work shall:

- Be competent and suitably qualified to carry out the work
- Be properly trained to complete the work to the required standard and in a safe manner
- Be equipped to carry out the work
- Be properly supervised

Before undertaking any maintenance work, the maintenance personnel shall:

- Inform their supervisors that the work is going ahead
- Before starting the work, lock off plant or equipment and ensure that the plant or equipment is safe to work on
- Post notices warning of works in progress

On completion of work, the maintenance personnel shall:

- Remove all tools and maintenance equipment
- Clean up and remove all rubbish from site to a point of safe disposal
- Test for correct operation of plant or equipment
- Remove warning notices

Job Card

Card No. : _____ Date :

Site :..... Name of Installation :

Equipment to be worked on:

Routine Maintenance : Urgent Maintenance :

Routine Maintenance

Frequency :

Weekly	Monthly	Quarterly	Half yearly	Annual	Biannual
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Requisitioned by:

Authorized by:

Signature:.....

Signature:.....

Date:.....

Date:.....

Seal :

Activity Report

Work done :

- (i)
- (ii)
- (iii)

Spare Parts used :

- (i)
- (ii)
- (iii)

Control Settings/Meter Readings :

Tests conducted :

Work outstanding :

- (i)
- (ii)

Defects noted:

Comments if any :

Data computerized:

Yes	No
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Date of next maintenance :

Maintenance Technician

Controlling Officer

Signature:.....

Signature:.....

Date:.....

Date:.....

Seal :

Pagla Sewage Treatment Plant

Screw Pump

Quarterly Maintenance								
1	Total Unit	1) Check for excessive vibration and noise in the unit 2) Apply grease to the nipples with grease gun following manufacturer's instructions						
2	Motor	Check that the electrical connections are in good condition and tight.						
3	Motor coupling	Check integrity of motor coupling, replace if necessary.						
Date of Work								
Next Date								
Yearly Maintenance								
1	Total Unit	Check that the total unit is secure and there is no external damage or missing component						
2	Motor	1) Lubricate motor bearings. 2) Check for signs of motor overheating 3) Check and replace any worn bearing. 4) Measure insulation resistance						
3	Screw Unit	1) Check for the integrity and damage of the screw drum and screw flights. 2) Check clearance between screw flights and casing. 3) Check centrality of screw/drum axis.						
	Screw Drum Flanges	Check for tightness of bolts and nuts.						
	Screw pump casing/Housing	1) Check for deposits and remove deposits, if any 2) Check for cracks, damage, deformation and /or leaks. Repair as necessary						
	Screw Unit Bearings	Check integrity of top and bottom bearings. Replace bearing if necessary						
	Grease Pump	1) Check grease pump (including worm gear and motor) for damage or ineffective operation. 2) Check if the grease pump motor gets overheated. 3) Check insulation resistance of the motor. 4) Lubricate/replace bearings, if necessary. 5) Check for damage /crack of steel tubing, replace if necessary						
	Frame	Check for damage, loosening of joints, bolts and /or welds. Repair.						
	Painting	Clean rust, peel out old paint from motor and agitator frame. Apply paint.						
Date of Work								
Next Date								

Primary Sedimentation Tank

Quarterly Maintenance								
1	Motor	Check for humming noise and overheating.						
2	Cycle-Gear	1) Check for abnormal sound/noise. 2) Check for leakage of lubricating oil, top up if necessary.						
3	Worm Gear Unit	1) Check for abnormal sound/noise. 2) Check for leakage of lubricating oil, top up if necessary						
4	Stirrer	1) Check security of stirrer arms and blades. 2) Check for damage and deformation. 3) Check for tightness of bolts, nuts and condition of welded joints.						
Date of Work								
Next Date								
Yearly Maintenance								
1	Total Unit	1) Check that the total unit is secure and there is no external damage or missing part. 2) Tighten foundation bolts and nuts 3) Check for excessive vibration and noise						
2	Motor	Check for insulation resistance						
3	Cycle-Gear	Change lubricating oil						
4	Sprocket and Chain	1) Check sprocket and chain for deformation, damage, crack, etc. 2) Check elongation of the chain with a chain gauge. 3) Grease sprocket and chain. 4) Check security of the chain guard						
5	Worm Gear Unit	Change lubricating oil						
6	Power source Cable	Check for crack and damage.						
7	Stirrer	1) Check for proper pivoting of the stirrer blades 2) Check for wear of the arm wheels and ensure that they rotate freely 3) Lubricate /grease as necessary.						
Date of Work								
Next Date								
Every Two Year Maintenance								
1	Motor	Check for motor bearings, change if necessary.						
2	Walkway Bridge	Check security of walkway bridge including staircase and railing. Check for damage and deformation. Check tightness of bolts, nuts and condition of welded joints.						
3	Trolley Rail	Check security and that all bolts and nuts are tight.						
4	Painting	Check for rust and peeled up paint of the entire unit. Clean and apply paint.						
Date of Work								
Next Date								