TECHNICAL MANUAL

MAINTENANCE
Volume 2

M081 ASPHALT MIXING PLANT

NSN 3895-01-369-2551

Manufactured by
WRT Equipment Ltd.
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Saskatoon, Saskatchewan
Canada S7K 3V1

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TECHNICAL MANUAL
TM 5-3895-374-24-2

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Unit, Direct Support and General Support
Maintenance Manual
for
ASPHALT MIXING PLANT
NSN 3895-01-369-2551

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended changes to Publications and Blank Forms), or DA Form 20282, located in the back of this manual, direct to: Commander, US Army Tank-automotive and Armaments Command, ATTN: AMSTA-IM-MMAA, Warren MI 48397-5000. A reply will be furnished to you. You may also provide DA Form 2028-2 information to TACOM via datafax or e-mail. TACOM's datafax number for AMSTA-IM-MMAA is: (810)574-6323 and the email address is: amsta-im-mmaa@cc.tacom.army.mil

THIS MANUAL SET CONSISTS OF THE FOLLOWING:

VOLUME 1	OPERATOR'S MANUAL	TM 5-3895-374-10
VOLUME 2	MAINTENANCE MANUAL	TM 5-3895-374-24-1
VOLUME 3	MAINTENANCE MANUAL	TM 5-3895-374-24-2
VOLUME 4	PARTS MANUAL	TM 5-3895-374-24P

The Maintenance information for the Asphalt Mixing Plant (AMP) is contained in two volumes, TM 5-3895-374-24-1 AND TM 5-3895-374-24-2. Each volume contains a table of contents that covers both volumes and shows where volume 1 ends and volume 2 starts. make sure you have both volumes with you when performing maintenance.

This maintenance manual is an Army authentication of a commercial manual. The manual is not formatted to Department of the Army specifications. This manual does contain the information needed to perform maintenance on the AMP.

You will find some pages in this manual have two pages numbers, one in parenthesis. The page number contained in the parenthesis is the true page number that tracks with the table of contents. The page number not in the parenthesis is a page number that exists in the commercial vendor manual as it appears in commercial use. This commercial page number has been left on the page to maintain continuity with the internal page referencing of the commercial vendor sections.

Refer to TB 5-3895-374-14 for any Warranty Issues. This TB takes precedence over all vendor warranty information that may appear in this manual.

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WARNING

The following procedures must be followed when performing maintenance on the AMP. Failure to do so may result in injury or death.

- Use of ear protection for all plant personnel working outside the control van.

- Use of all safety devices and guards provided with the plant.

- Personnel must wear the following protective items at all times.

Coveralls (not loose fitting)
Safety glasses with side shields
Insulated gloves - non-asbestos
Hard hat
Safety shoes

- Routine maintenance procedures must be followed at all times. Maintain all equipment in good operating condition. This includes but is not limited to;

Fuel lines
Asphalt lines
Hot oil heating lines
Hydraulic lines
Electric cables and connectors
Air lines

- Restrict entry to all confined spaces except for authorized and scheduled maintenance inspections. Establish a confined space entry SOP IAW DHEW (NIOSH) Publication No. 80-106 (provided with AMP) when maintenance requires work in a confined space. This SOP must be coordinated with your local medical (preventive medicine) authority. Prior to entry, test for fumes and make provisions for adequate ventilation. Never work alone. Always use the buddy system when working in confined spaces.

- Do not operate equipment in an enclosed area unless all exhaust fumes are safely vented away from the work area.

- Army field manual (FM) 21-10 must be followed if the AMP is operated in conditions that expose its operators and maintainers to heat stress conditions.

- USE COMMON SENSE

NOTE

You must be aware of and avoid the following potential hazards when operating and maintaining the AMP. Recommendations are included to provide the necessary information so these hazards can be avoid.

II. HAZARDS AND RECOMMENDATIONS

Table 1-1 Hazards and Recommendations

1. Control Van

HAZARD	DESCRIPTION	RECOMMENDATION
High voltage electrical	All electrical switch-gear are located in this unit and all power cables are attached to the power source in the van.	Operate and maintain in accordance with all safety procedures. Do not perform repair work without a qualified electrician.
Compressed air	The trailer air brake system is comprised of air lines, tanks and valves which activate the trailer brakes.	Maintain system in good operating condition. Release air pressure prior to repairing the system.

2. Four Bin Feeder

HAZARD	DESCRIPTION	RECOMMENDATION
Noise	Aggregate materiels loaded into the four bin feeder by a front end loader may cause intermittent noise levels exceeding 85 dba.	Use of ear protection.
Operating machinery	V-Belt drives and moving conveyor belts.	Use of guards during operation. Operator should not wear loose fitting clothing.
High voltage electrical	Power cables.	Avoid contact when energized. Maintain in good condition. Use cable supports provided. Do not perform repair work without a qualified electrician.
Fluids under pressure	Hydraulic cylinders, lines and valves.	Maintain lines in good operating condition. Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard hat)

HAZARD	DESCRIPTION	RECOMMENDATION
Compressed air	The trailer air brake system is comprised of air lines, tanks and valves which activate the trailer brakes.	Maintain system in good operating condition. Release air pressure prior to repairing the system.

3. Feed Conveyor

HAZARD	DESCRIPTION	RECOMMENDATION
Operating machinery	Vibrating screen and moving conveyor belt.	Use of guards during operation. Operator should not wear loose fitting clothing.
Noise	Aggregate materiels discharged onto the screen may cause steady noise levels exceeding 85 dba.	Use of ear protection.
High voltage electrical	Power cables.	Avoid contact when energized. Maintain in good condition. Use cable supports provided. Do not perform repair work without a qualified electrician.
Fluids under pressure	Hydraulic cylinders, lines and valves.	Maintain lines in good operating condition. Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard hat)
Compressed air	The trailer air brake system is comprised of air lines, tanks and valves which activate the trailer brakes.	Maintain system in good operating condition. Release air pressure prior to repairing the system.

4. Drum Mixer

HAZARD	DESCRIPTION	RECOMMENDATION
Noise	Aggregate materiels discharged into the feed chute may cause steady noise levels exceeding 85 dba.	Use of ear protection.

HAZARD	DESCRIPTION	RECOMMENDATION
Operating machinery	The drum is chain driven.	Use of guards during operation. Operator should not wear loose fitting clothing.
High voltage electrical	Power cables.	Avoid contact when energized. Maintain in good condition. Use cable supports provided. Do not perform repair work without a qualified electrician.
Fluids under pressure	Diesel fuel lines, asphalt pump and lines. Hydraulic cylinders, lines and valves.	Maintain lines in good operating condition. Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard hat)
Compressed air	The trailer air brake system is comprised of air lines, tanks and valves which activate the trailer brakes.	Maintain system in good operating condition. Release air pressure prior to repairing the system.
High temperature	The burner creates temperatures to 800° F. The drum, asphalt aggregate mixtures being discharged and exhaust gases will become hot (approximately 300° F).	Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard hat, work boots)
Fumes	Asphalt hot mix is discharged from the drum mixer.	Avoid inhaling fumes and operating equipment in a confined area.
Flammable and combustible materiels	The burner is a diesel fired unit. Liquid asphalt.	Inspect and maintain burner safety systems as per manuals. Operate equipment with trained personnel.

HAZARD	DESCRIPTION	RECOMMENDATION
Confined space	Repairs to the drum mixer will require work inside the drum.	Check drum for fumes prior to entry. Use a fan for fresh air circulation. Use motor control lock out device prior to entering the drum. Maintenance work may only be performed after proper safety procedures have been met.

5. Surge Bin

HAZARD	DESCRIPTION	RECOMMENDATION
Noise	Intermittent noise levels exceeding 85 dba may be caused by: the drag slat conveyor elevating asphalt hot mix to the batcher; air compressor; exhausting air from air cylinders; and asphalt being discharged from the batcher to the bin or from the bin into trucks.	Use of ear protection.
Operating machinery	The air compressor is belt driven. The drag slat conveyor is a chain with steel attached to it. The chain runs on sprockets. The conveyor drive is chain driven.	Use of guards during operation. Operator should not wear loose fitting clothing.
High voltage electrical	Power cables.	Avoid contract when energized. Maintain in good condition. Use cable supports provided. Do not perform repair work without a qualified electrician.

HAZARD	DESCRIPTION	RECOMMENDATION
Fluids under pressure	Hydraulic cylinders, lines and valves.	Maintain lines in good operating condition. Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard hat)
Compressed air	An air compressor is mounted on this unit and provides air at 125 psi to the gate cylinders. An air tank is part of the compressor. The trailer air brake system is comprised of air lines, tanks and valves which activate the trailer brakes.	Maintain system in good operating condition. Release air pressure prior to repairing the system.
High temperature	Asphalt aggregate mixtures being discharged and exhaust gases will become hot (approximately 300^0 F)	Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard hat)
Fumes	Asphalt hot mix is discharged from the slat conveyor. confined area.	Avoid inhaling fumes and operating equipment in a

6. Baghouse

HAZARD	DESCRIPTION	RECOMMENDATION
Noise	Steady noise levels exceeding 85 dba may be caused by: the air compressor, rotary exhaust fan and blower.	Use of ear protection.
Operating machinery	The air compressor is belt driven. The exhaust fan is belt driven.	Use of guards during operation. Operator should not wear loose fitting clothing.

HAZARD	DESCRIPTION	RECOMMENDATION
High voltage Power cables. electrical	Avoid contact when energized.	Maintain in good condition. Use cable supports provided. Do not perform repair work without a qualified electrician.
Fluids under pressure	Hydraulic cylinders, lines and valves.	Maintain lines in good operating condition. Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard hat)
Compressed air	An air compressor is mounted on this unit and provides air at 95 psi. An air tank is part of the compressor. The trailer air the system. brake system is comprised of air lines, tanks and valves which activate the trailer brakes.	Maintain system in good operating condition. Release air pressure prior to repairing
High temperature	The air drawn from the drum into the baghouse is approximately 3000 F. hat)	Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard
Fumes	The air drawn from the drum mixer may contain diesel and/or asphalt fumes.	Avoid inhaling fumes and operating equipment in a confined area.
Confined space		Restrict entry

7. Generator Trailer

HAZARD	DESCRIPTION	RECOMMENDATION
Noise	Steady noise levels exceeding 85 dba may be caused by the generators.	Use of ear protection.

HAZARD	DESCRIPTION	RECOMMENDATION
High voltage electrical	Produced by this equipment.	Avoid contact when energized. Maintain in good condition. Use cable supports provided. Do not perform repair work without a qualified electrician.
Fluids under pressure	Diesel lines and coolant hoses.	Maintain lines in good operating condition. Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard hat)
Compressed air	The trailer air brake system is comprised of air lines, tanks and valves which activate the trailer brakes.	Maintain system in good operating condition. Release air pressure prior to repairing the system.
High temperature	Operation will generate heat.	Wear protective clothing while operating the plant. (gloves, coveralls, safety glasses, hard hat)
Fumes	Diesel exhaust may cause nausea or headaches. confined area.	Avoid inhaling fumes and operating equipment in a
Flammable and combustible materiel	The generators are diesel engine powered units.	Inspect and maintain generators as per manuals.

8. Dedrummer/Melter

HAZARD	DESCRIPTION	RECOMMENDATION
High temperature	Hot oil is used to melt the asphalt.	Wear protective clothing while operating the plant (gloves, coveralls, safety glasses, hard hat).
Operating machinery	A electric chain hoist is operated to raise and position drums.	Use of guards during operation. Operator should not wear loose fitting clothing.