DURO TANK™
'BUILT TOUGH, PROVEN TOUGH'
ABN: 19 620 002 557

RISK ASSESSMENT

TYPE	Water Trailer
MAKE	Durotank
MODEL	PTRW012SAM
CHASSIS/ VIN	629DT001BPL063006

Report Number	DT-RA4237
Date	18/01/2024
Created By	M Hart
Owner	Red Bower Hire
Assessment Purpose	Plant In use

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SECTION 1 IMPORTANT INFORMATION

All operators of this machine must read and understand this assessment prior to operation of this machine. This report relates to the machine as it appeared on the day of inspection. A reassessment shall be conducted if any alterations are made to this trailer after the date noted on this assessment.

The safety hazards associated with the operating and maintaining of this item of plant have been identified as far as practical by visual inspection. The condition of this item of plant will change with use. No physical testing has been conducted (e.g. Wire rope tests, stress tests, structural/non-destructive tests, noise tests, vibration tests, brake tests, insulation tests etc.) unless stated otherwise in the notes.

Controls outlined in both section 4 & 5 of this report must be maintained at all times whilst this item of plant is in operation. Any information contained in the notes section of this report shall be read in conjunction with section 3.

Additional Risk Assessment may be required, specific to the operating environment, for this item of plant. All operators and maintenance personnel must be appropriately trained in the use & maintenance of this machine.
For further information regarding this report contact Durotank – 1300 829 802 please reference the chassis/ VIN number found on page 1 of this document.

SECTION 2 MACHINE DETAILS

NOISE TEST RESULTS	Sound Level	74dba
CAPACITIES	Diesel Tank	5.4L
	Water Tank	1,200L
DIMENSIONS/ WEIGHTS	Ground Clearance (mm)	380mm
	Length (mm)	
	Width (mm)	2020mm
	Height (mm)	1,500mm
MOTOR	Make and Model	Yanmar L100
	Power System	Diesel Combustion Engin
GENERAL	Weight – Empty (kg)	700kg
	Weight – Max Load (kg)	2,000kg
TYRES	No. of Tyres	2
	Tyre Size	245/75/R16
CAPABILITIES	Delivery Rate – Pressure Cleaner	15LPM
EXTRAS	Spare Tyre	YES
	Tool Box	NO
	E-Stop	YES
	Wheel Chocks	YES

SECTION 3 RISK ANALYSIS / RISK EVALUATION

RISK ANALYSIS

		CONSEQUENCE				
LIKELIHOOD		**1. INSIGNIFICANT** Dealt with by in house first aid	**2. MINOR** Treated by medical professionals, hospital out patients	**3. MODERATE** Significant non-permanent injury, overnight hospital stay	**4. MAJOR** Extensive permanent injury eg. Loss of fingers extended hospital stay	**1. CATASTROPHIC** Death, permanent injury eg. Loss of limb, quadriplegia
	A. Almost certain to occur in most circumstances	MEDIUM 8	HIGH 16	HIGH 18	CRITICAL 23	CRITICAL 25
	B. Likely to occur frequently	MEDIUM 7	MEDIUM 10	HIGH 17	HIGH 20	CRITICAL 24
	C. Possibly and likely to occur occasionally	LOW 3	MEDIUM 9	MEDIUM 12	HIGH 19	HIGH 22
	D. Unlikely to occur but could happen	LOW 2	LOW 5	MEDIUM 11	MEDIUM 14	HIGH 21
	E. May occur but only in rare circumstances	LOW 1	LOW 4	LOW 6	MEDIUM 13	MEDIUM 15

RISK EVALUATION

CRITICAL	Act immediately to mitigate risk. Implement risk treatment (s) in accordance with the risk treatment table below.
HIGH	Act immediately to mitigate risk. Implement risk treatment (s) in accordance with the risk treatment table below. if the appropriate risk treatments are not immediately accessible establish interim risk treatment strategies. Permanent risk treatments must be implemented within one week
MEDIUM	Take Reasonable steps to mitigate and monitor risk. Implement risk treatment (s) in accordance with the risk treatment table below. Permanent risk treatments must be implemented within one month
LOW	Take Reasonable steps to mitigate and monitor risk. Implement risk treatment (s) in accordance with the risk treatment table below. Permanent risk treatments must be implemented within three month

RISK TREATMENT

Selecting the most appropriate risk treatment option involves balancing the costs and efforts of implementation against the benefits derived, with regard to legal, regulatory and other requirements. (Source AS/ NZS ISO 31000:2009)	
ELIMINATE	Eliminate the risk source.
SUBSTITUTE	Provide and alternative that is capable of performing the same task which is safer
ENGINEERING	Provide or construct a physical barrier or guard
ADMINISTRATION	Develop policies, procedures, practices, and guidelines to mitigate the risk. Provide training instruction and supervision about the risk source
PPE	Provide Personal Protective Equipment to protect the individual from the risk source

SECTION 4 RISK TREATMENTS REQUIRED

This section of the report pertains to hazards created by use of this item of plant which currently do not have risk treatments in place. The risk treatments recommended in this section have been developed based on relevant Australian Standards, health & safety legislation, the hierarchy of risk treatment in accordance with the guidelines set forth in AS/NZS ISO 31000 – Risk Management and various other sources. The recommended risk treatment measures must be developed, implemented and validated as effective prior to the operation, maintenance or testing of this item of plant. Treatments applied must be dated and initialled adjacent the recommendations. All operators must read and understand the entire contents of this section prior to operating this item of plant.

HAZARD (S)	Prelim Risk Rating	Residual Risk Rating	Time Frame	Due Date	Date Rectified	Initial

SECTION 5 TREATMENTS IN PLACE

HAZARD(S)		Prelim Risk Rating	Residual Risk Rating
	INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Pre-start checklist The operational pre-start checklist must be completed before that start of each operation. If any faults are detected, they must be rectified prior to commencement of operation. The inspections must be documented as part of your plant safety management program.			
References: Work Health & Safety Act & Regulations – Occupational Health & Safety Act & Regulations			
	INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Tow Coupling Label The aggregate mass of this trailer is less than 2000kg and a ball type tow coupling is fitted. Accordingly the tow ball coupling is marked with the following information in characters in English not less than 5mm high – A – Factory Mark, Trade name or manufacturers name (if applicable) B – The mark '50' to indicate the size of the tow ball for which it is intended. C – The manufacturer's approved maximum coupling body rating (e.g. '750kg', '2000kg' or '3500kg') D – A code to indicate the serial number, batch, production date or similar. E – The words 'DO NOT WELD' if the coupling body is manufacturer from non-weldable materials F – The words 'WELD ONLY' if the coupling body is specifically designed to be attached by welding only. This information must be marked upon the coupling and followed at all times whilst the machinery is in use			
References: AS4177.3			

	**INCORRECT OPERATION**	CRITICAL 24	MEDIUM 15
Risk Treatments in Place: Operator competency Only persons who are qualified, trained and experienced and/or hold the relevant certification/ license can operate this machinery. If there is not a competent/ licensed person available for operation then only person who are supervised by a competent/ licensed person can operate this machinery.			
References: Work Health & Safety Act & Regulations – Occupational Health & Safety Act & Regulations			
	INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Operation Manual. This manual must be available at all times to all potential operators and supervisory staff. All potential operators must read and be familiar with this handbook prior to operating. A complete risk assessment/ Job Safety Analysis must b undertaken covering all operating processes and environments associated with this machinery. SWMS should be produced for specific tasks associated with use of this machinery			
References: Work Health & Safety Act & Regulations – Occupational Health & Safety Act & Regulations			
	INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: SOP The information in the safe operation procedures must be followed at all times whilst operating this machinery			
References: Work Health & Safety Act & Regulations – Occupational Health & Safety Act & Regulations			
	INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Control Labels All Controls including all levers, buttons, pedals, switches etc are clearly labelled as to their purpose and method of operation. These labels must be maintained in a clear and serviceable condition at all times.			
References: AS/NZS4024.1905			
	POISONING	HIGH 22	MEDIUM 15
Risk Treatments in Place: SDS The SDS (Safety Data Sheet) is available for all chemical/ product being used with this machinery. This sheet contains all relevant safety information. The advice and instructions contained in the SDS must be strictly adhered to. the Relevant SDS must be available at all times whilst this machinery is in operation.			
References: Work Health & Safety Act & Regulations – Occupational Health & Safety Act & Regulations			

	NON COMPLIANCE, COLLISION	CRITICAL 24	MEDIUM 15

Risk Treatments in Place: Trailer Brakes

This machine has fully functional brakes fitted to atleast one axle

These brakes must be fully functional at all times whilst the machine is in operation. The brakes must be regularly inspected and tested. These inspections and test must be documented as part of your safety program.

References: Australian Design Rules

	CRUSHING, COLLISION	CRITICAL 24	MEDIUM 15

Risk Treatments in Place: Park Brake

This machine is fitted with a fully functional park (hand) brake which meets the following requirements.

1. Is separate to the service brakes.
2. Has a device which maintains the 'on' position until intentionally disengaged.
3. Requires at least two separate and distinct movements to disengage the park brake.

The park brake must be regularly inspected and tested. These inspections and test must be documented as part of your safety program.

References: Australian Design Rules

	CRUSHING, COLLISION	CRITICAL 24	MEDIUM 15

Risk Treatments in Place: Trailer Safety Chain

This machine is fitted with a safety chain which will keep this machine attached to the towing unit in the event of failure to the primary tow coupling. The use of this device is mandatory on public roads and use at all other times is highly recommended.

The size and capacity of all components of this device must be proportional to the mass of the machine and conditions under which this machine is towed

The condition of this device must be monitored as part of the 'pre start' checklist. If any faults are detected towing of this unit must not occur until repair or replacement by a competent person occurs

References: Australian Design Rules

	NON COMPLIANCE	HIGH 22	MEDIUM 15

Risk Treatments in Place: Trailer Compliance Plate

This trailer is fitted with a manufacturers compliance plate that has the following information marked upon it as a minimum.

1. Name of the manufacturer
2. Trailer model
3. VIN (Vehicle Identification Number)
4. Date of manufacture
5. ATM (aggregate trailer mass)
6. A certification statement complying with the standards act 1998

Ensure that this plate is present and legible at all times whilst this trailer is in operation

References: Australian Design Rules

	COLLISION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Tow Couplings (Ball Type)

The aggregate mass of this trailer is less than 3500kg and a ball type tow coupling is fitted. Accordingly a self-locking mechanism together with a separate means of automatically retaining this device in the lock position is also fitted. This device must meet the following criteria at all times whilst the trailer is in use.

A – the coupling body is not prone to failure or undue deterioration with use
B – the coupling body is placed so that the likelihood of inadvertent damage to any component while in use is minimsed
C – self-locking occurs when the coupling body is coupled with the towball and is verifiable by visual inspection.
D – the self-locking device is constructed so as to prevent accidental disengagement while in operation
E – the self-locking device can easily be manually released to permit disengagement of the coupling body from the towball
If at any stage any of these criteria are not met, operation must cease until repaired by competent persons

References: AS4177.3

	CRUSHING, COLLISION	HIGH 22	MEDIUM 1

Risk Treatments in Place: Loose Loads – External

All loads are correctly positioned and securely restrained to the trailer to prevent unintended movement during transit

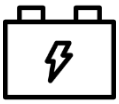
References: ISO31000

	COLLISION	HIGH 22	MEDIUM 11

Risk Treatments in Place: Turning, Braking and Presence Lighting

This trailer is fitted with lighting to indicate presence, braking and turning. All of these lights must be fully functional whist this trailer is in operation in areas of reduced light.

References: Australian Design Rules

	OPERATIONAL MALFUNCTION	HIGH 22	LOW 2
Risk Treatments in Place: Plant Modification The Plant is in original condition			
References: ISO31000			
	STRAINS	HIGH 19	LOW 5
Risk Treatments in Place: Controls Ergonomics All controls including levers, buttons pedals, switches etc are placed near the operators work position and are easy to reach and operate during the execution of the operator's normal duties. This applies for all persons within the 95th percentile of the normal population distribution			
References: AS/NZS4024.1901			
	ELECTRIC SHOCK, BURNS	MEDIUM 12	LOW 6
Risk Treatments in Place: Battery Cover All Batteries fitted to the trailer are constrained to prevent displacement & fitted with a permanent and sturdy cover which allows for ventilation. The constraint and cover must be present and fully functional and serviceable at all times whilst the trailer is in operation			
References: AS/NZS4024.1201			
	CURRENT OR PREVIOUS STRUCTURAL DAMAGE	CRITICAL 25	MEDIUM 15
Risk Treatments in Place: Structural Integrity Regular checks for structural integrity must be undertaken. Look for cracks in frame/ chassis (current/ repaired), bends or damage to structural components etc.			
References: ISO31000			
	INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Maintenance Manual The manufacturers maintenance manual has been supplied for this trailer. The manual(s) must be available at all times to all users and maintenance staff of this trailer. All users and maintenance staff must read and be familiar with these handbooks prior to maintaining or repairing this trailer. A complete risk assessment/ JSEA must be undertaken covering all inspection, maintenance, servicing and transportation requirements of this trailer prior to use. A full assessment of the competence of people using the book (s) must also be undertaken.			
References: Work Health & Safety Acy & Regulations, Occupational Health & Safety Act & Regulations			

	INSTABILITY, COLLISION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Tyres The tyres and wheel components must be inspected as part of a 'pre start' checklist. These inspections must be documented as part of your plant safety program.			
References: ISO31000			
	OPERATIONAL MALFUNCTION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Major Fluid Leaks This trailer must remain free of leaks at all times, (this includes engine, transmission, cooling system, air, fuel, drive line, wheel hubs, steering, hydraulics). Development of a major leak will require this trailer to be stood-down until repaired. Minor leaks must be repaired within 1-14 days.			
References: ISO31000			
	OPERATIONAL MALFUNCTION	HIGH 21	MEDIUM 15
Risk Treatments in Place: Service Records Service and maintenance records are available for this trailer. These records must continue to be maintained and stored in a secure area as part of your safety management program. This program includes the undertaking of regular inspections concerning the general condition of the trailer including (but not limited to) tyre condition, oil levels and wear and tear on critical items such as brakes etc. all OEM prescribed scheduled and non scheduled maintenance must be documented as part of these records and attended to withing a risk management framework.			
References: Work Health & Safety Acy & Regulations, Occupational Health & Safety Act & Regulations			

SECTION 6 IMAGES AND NOTES

TYPE	Water Trailer	**Report Number**	DT-RA4237
MAKE	Durotank	**Date**	18/01/2024
MODEL	PTRW012SAM	**Created By**	M Hart
CHASSIS/ VIN	629DT001BPL063006	**Owner**	Red Bower Hire
		Assessment Purpose	Plant in use

OPERATOR ACKNOWLEDGEMENT

I the undersigned acknowledge that I have read and understand the risk management report described above. I also acknowledge that I have received a copy of this risk management report.

DATE	NAME	COMPANY/ POSITION	SIGNATURE