DESCRIPTION

Introduction
The equipment consists of a Containment Mat, 12 ft. wide x 35 ft. long with 4″ diameter sides (berms) into which foam tubes are inserted. The mat is manufactured from a polyurethane material which is resistant to a wide range of chemicals including Skydrol. An alternative version of the mat with inflatable side walls is also available and a system for inflating the sides of the mat is conveniently mounted on the front of the trolley consisting of a rechargeable nitrogen cylinder, a pre-set high pressure regulator, on/off ball valve and a 15′ hose with Schrader connector.

A 12V DC motorised hose reel is provided to conveniently store and dispense the mat and the reel is mounted on an 87 gallon stainless steel tank which in turn is fitted on a rigid steel chassis. The chassis is supported by three heavy duty wheels with 16″ super elastic tyres, one of which is mounted on a heavy duty steering castor wheel. A drawbar, which can be locked in the upright position for storage and safety, is attached to the steering castor unit. A drawbar operated parking brake acts on the front wheel when the drawbar is locked in the upright position.

A vacuum unit has a 110V vacuum motor head and is powered by two 12V batteries. The batteries are stored in plastic containers which are mounted on top of the tank underneath the reel. An automatic charger is supplied with the rig to connect the batteries with an external power supply of 220V AC when the batteries require a recharge.

A vacuum floor tool for collecting the waste water from the mat is stored on top of the tank. The vacuum floor tool connects to the vacuum unit via a flexible hose and when switched on sucks the waste water from the containment mat into the 87 gallon tank. A ¾″ BSP drain ball valve is fitted on the back of the tank to empty the waste material into the designated collection tank/area were filtration is available.

Operation
Position the trolley approximately 35′ away from the exhaust of the engine being washed and at right angles to the engine. Apply the brake by locking the tow bar in the upright position. Unwind the mat from the top of the hose reel toward the rear of the engine and detach the three velcro straps from the hose reel (a minimum of two persons required, one on each side of the mat). When fully extended, open the mat out to its full width.

Re-position the trolley at a safe distance to one side of the engine exhaust. There are seven foam tubes for each of the mat's long sides and two for each of the end sections. Slide the foam tubes into the three openings on each of the long sides (to the left and right) and position equally. Then insert the two tubes into each of the single central opening on each of the shorter ends (see illustration 8 inside).

When using the alternative inflatable version of the mat, firstly ensure the nitrogen cylinder's on/off inflation valve is in the off position (across the direction of flow). Turn on the nitrogen cylinder (fully anti-clockwise). Ensure the cylinder has sufficient capacity, ie: minimum capacity 200psi as shown on the right hand gauge. If the cylinder needs charging, refer to charging procedure. Once the mat is in position for the wash, remove the dust cap from the mat's inflation valve, uncoil the inflation hose from the rig and attach the hose end fitting to the Schrader inlet valve on the mat, ensuring that the valve on the fitting is fully attached. Open nitrogen cylinder inflation valve to inflate the sides of the mat. When the sides are fully inflated the pressure relief valve on the mat blows off. Close the valve, disconnect the hose fitting and re-stow on the rig.

When the engine preparation has been completed, re-position the mat under the engine on top of the supplied protective underlay to ensure all waste water will be collected. This position is normally 3-4ft. in front of the back of the fan cowls toward the front of the engine. Fold the protective flaps over the sidewall openings and anchor with the supplied weights.

After the wash
Switch on the vacuum unit ensuring all three switches are in the 'on' position and use the vacuum floor tool to suck up the liquid from inside the collection mat.

Once all the waste water has been vacuumed into the tank, remove the foam tubes, fold in the sides of the mat and move the trolley to the original position. Connect the velcro straps to the reel and use the rig's motor to guide the mat back onto the reel.

For the inflatable mat, unscrew the protective cap on the large inflation valve which is positioned adjacent to the valve used to inflate the sides and use the supplied squeegee to help force the air towards the valve. Once the air has been expelled, proceed as above.

DETAILS

Trolley Size: (L) 3780mm x (W) 1020mm x (H) 1918mm **Weight:** (Dry) 668Kg

Dimensions of Kyoto mat: (L) 10668mm (35′) x (W) 3658mm (12′) x (Berm height) 102mm (4″)

Packing crate dimensions: (L) 3759mm x (W) 1118mm x (H) 1855mm

Rig variations

JMP/KYOTO/D/6777 *(First operational prototype - December 2009)*

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Contractors to
H.M.Government Departments
Registered with ISO 9001:2015

THE JUNIPER TRAILER MOUNTED CONTAINMENT MAT

JMP/KYOTO/D/6777/C200

(NSN 4235-99-464-5834)

AIRCRAFT SERVICE EQUIPMENT

Used in conjunction with our compressor washing rigs, the new containment trolley provides the ideal solution to your engine washing and waste water collection problems

1
Juniper's 2x25 gallon wash rig (JMP/CFM56/D/4777/C200) in the livery of TAM Linhas Aereas being used with the new Containment Mat to wash the V2500 engine fitted to an Airbus A320 at the Jardim Aeroporto, San Paulo, Brazil in February 2010

2
The trailer being wheeled into position for a successful demonstration wash on the GE90 engine fitted to a Boeing 777-200 aircraft for British Airways at Gatwick Airport in June 2010

3
The results of the GE90 wash for British Airways successfully caught by Juniper's new collection system.

4
Collecting the waste water at the completion of TAM's engine wash. The two rubber squeegee blades on the vacuum nozzle are adjustable (pics 5,6 & 7). In operation we have found that having the blades level with the wheels at either end of the vacuum head (pic 7) is the most efficient position for water collection.

8
The standard version of the mat showing the configuration of foam tubes to be inserted into the side walls (berms), the suggested layout of the six supplied weights and the positioning of the mat's protective underlay.

9
The Containment Mat in position during a recent engine wash for Aegean Airlines on a V2500 engine fitted to one of their Airbus A320 aircraft. The flexible vacuum hose is connected and ready for use.

10
The mat is wound back onto its reel after the successful engine wash for TAM Linhas Aereas in Brazil.

Our new self contained Trailer Mounted Containment Mat (JMP/KYOTO/D/6777/C200) is now available and features a high-powered vacuum unit discharging into an 87 gallon onboard storage tank powered by a 24V battery giving over 3 hours continuous operation before recharging is required. The unit is supplied complete with a detachable, fully adjustable vacuum collection nozzle with robust flexible hose, battery charger, rubber squeegee, weights for anchoring the mat, and a repair kit in case of punctures or tears to the mat.

Embodying all the traditional Juniper virtues of rugged build quality, ease of use and unrivalled back-up and expertise, the Trailer Mounted Containment Mat might be just what you need for your next engine wash.

Features and benefits include:

- **Totally self contained**
- **Stowable polyurethane containment mat measuring 35' x 12' stored on a powered reel**
- **Integral 87 gallon stainless steel storage tank**
- **Powerful vacuum unit with flexible hose and nozzle assembly**
- **24V battery giving up to 3 hours continuous operation**
- **Battery charger supplied**
- **Towable, compact and manoeuverable**
- **Portable weights for anchoring mat in windy conditions**

The photographs shown here feature the alternative inflatable version of the containment mat.