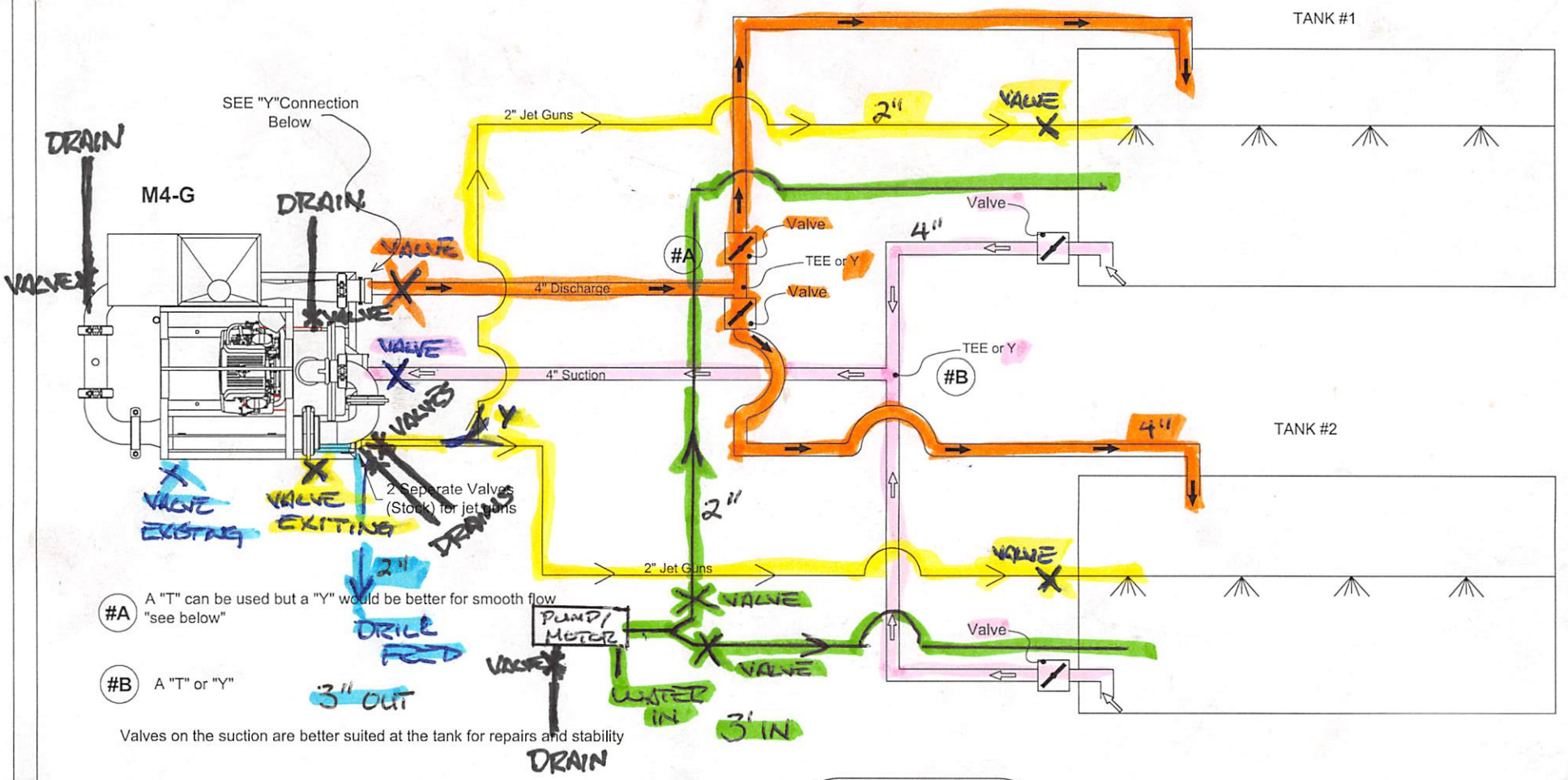
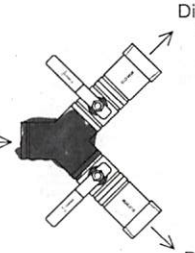
H02-84
SEP



"Y" Connection

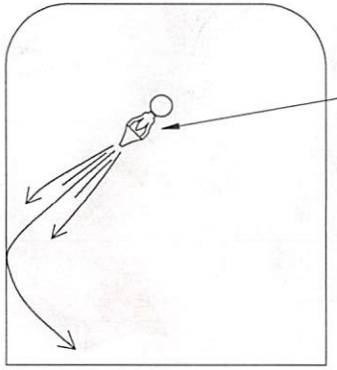
Use this connection instead of (#A)

Connects to Venturi Outlet



Discharge to Tank #1 *(NPT)*

Discharge to Tank #2 *(NPT)*



ALL Jet guns (4) mounted on one side of the pipe to create a rolling effect in the tank

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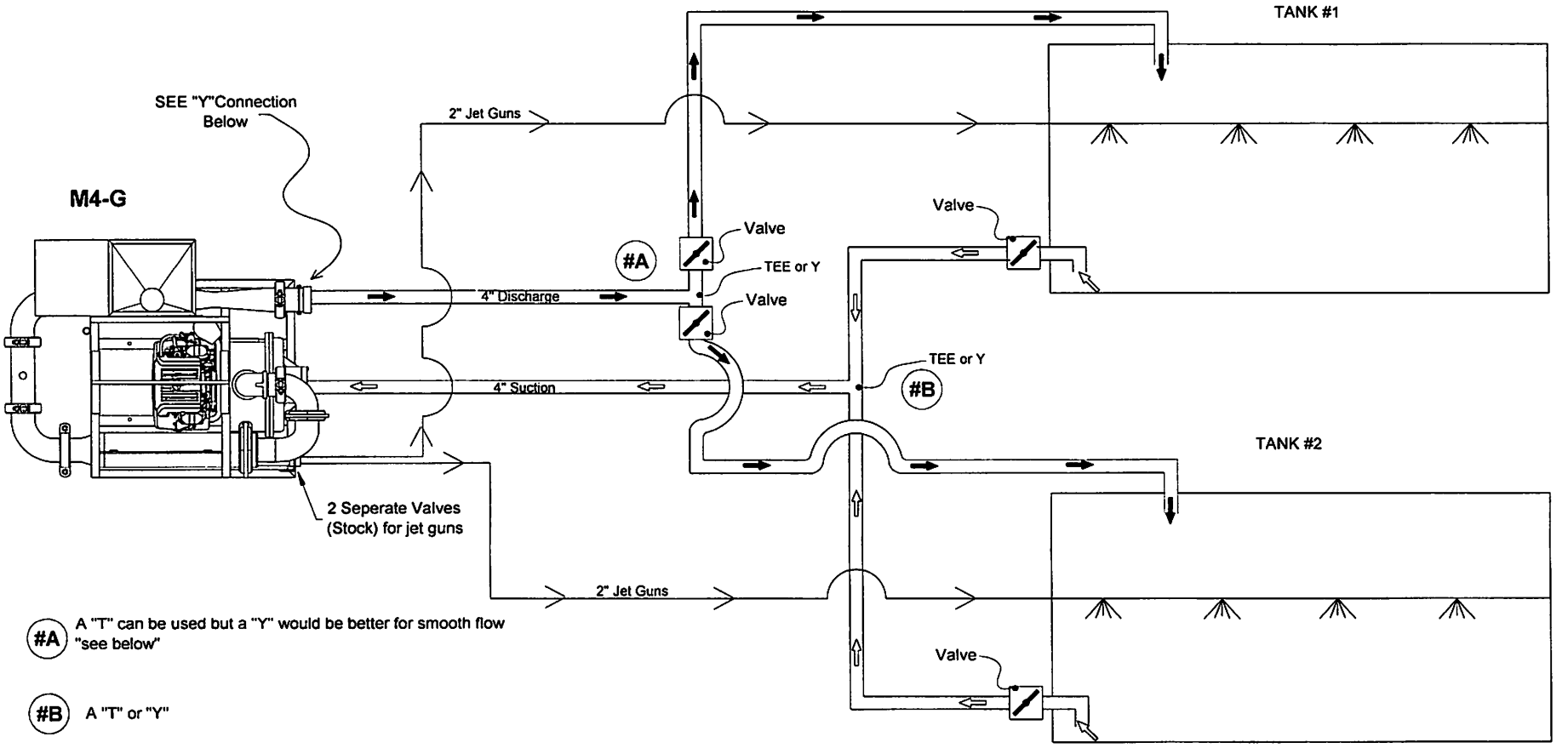
DWR. NUM.	DATE. 10 / 06 / 09
Arbaugh #1	REV.



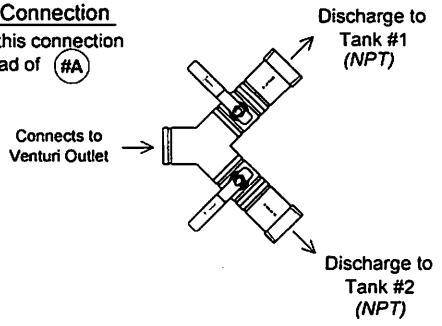
#A A "T" can be used but a "Y" would be better for smooth flow "see below"

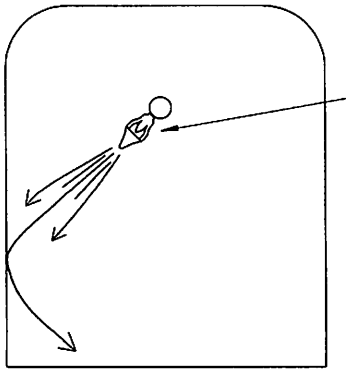
#B A "T" or "Y"

Valves on the suction are better suited at the tank for repairs and stability

"Y" Connection

Use this connection instead of #A





ALL Jet guns (4) mounted on one side of the pipe to create a rolling effect in the tank

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Arbaugh #1	REV.

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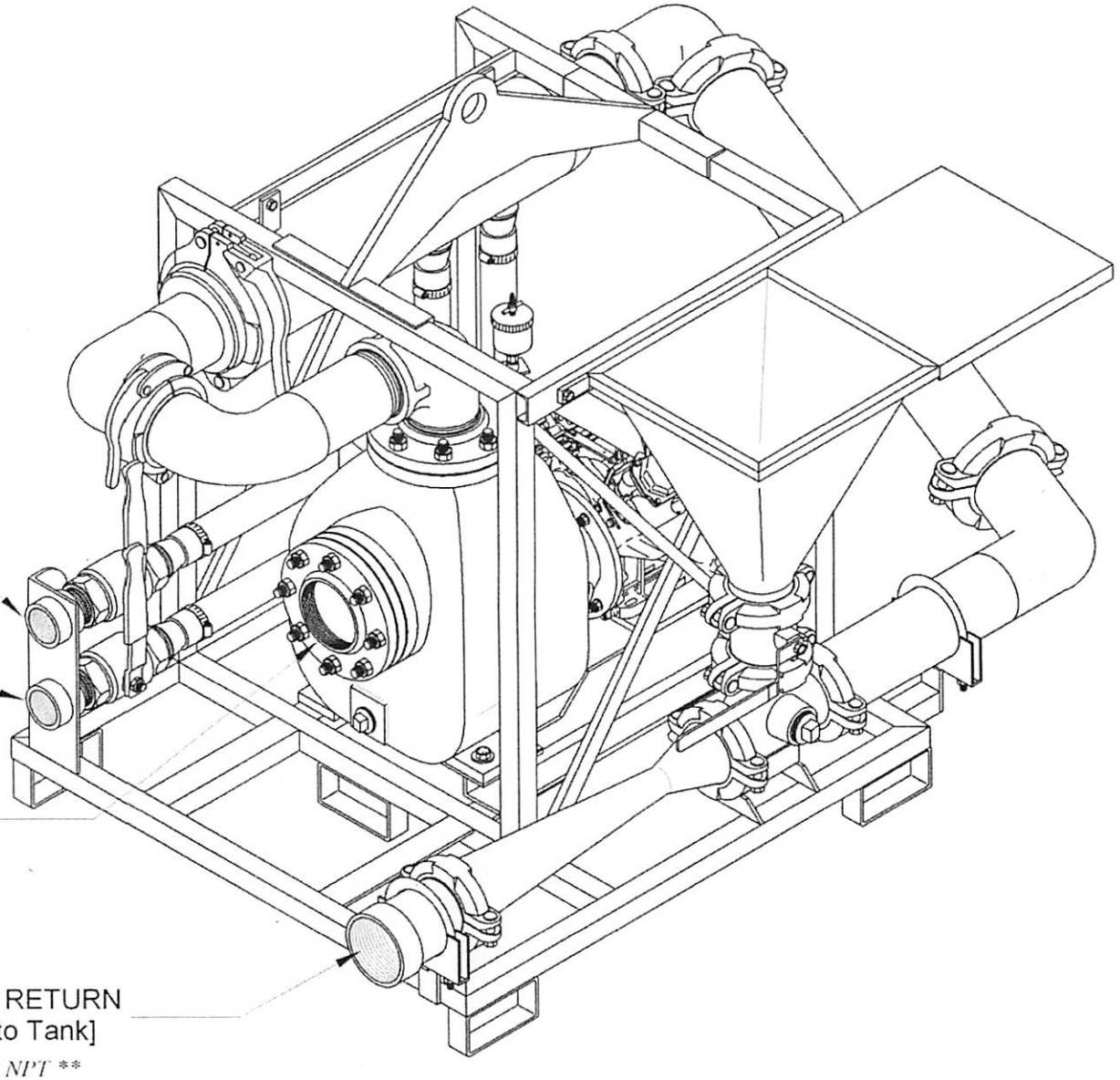
M4

(Hose Hook-ups)



DRILL FLUID OUT
[to Drill Rig]
*** 2" NPT ***

OUT FLOW
[to Tank Gun(s)]
*** 2" NPT ***

PUMP INTAKE
[in from Tank]
*** 4" NPT ***

This line should have a valve installed at the tank to facilitate shut down or reapirs.

FLUID RETURN
[out to Tank]
*** 4" NPT ***

This line should discharge above the maximun fill line of the tank. The air space will stop the siphon action of the fluid.

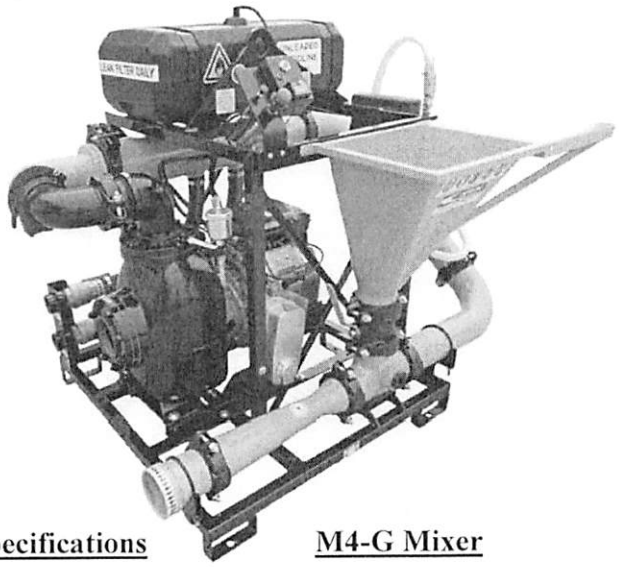
"ALL HOSES SHOULD BE KEPT TO THE SHORTEST LENGHT POSSIBLE TO ACHIEVE MAXIMUN PREFORMANCE."

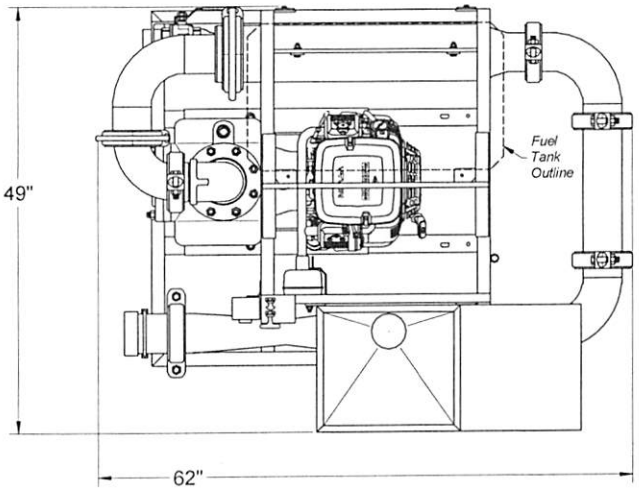
Universal 4" Mixer
Model M4-G

Surface to Surface Inc.

Features and Benefits **M4-G Mixer**

The M4-G universal mixer is designed around the time proven M series mixers of STS. Powered by an 23 hp air-cooled gasoline engine driving a 4" centrifugal pump, it makes effective use of the proprietary 4 point mixing system. The M4-G can be used as a new installation or retrofitted into an existing system of tank(s). Since the unit is connected by hose and not hard pipe, the placement of the mixer verses the tank(s) is less restricted and a configuration to suit the needs of the contractor are easier to achieve. The small size also makes it a portable, independent unit that is easier to transport from site to site.





Specifications	M4-G Mixer	Benefits
Dimensions	49" W x 62" L x 52" H	Small space saving footprint.
Weight	900 Lbs	Light weight for easy transportation.
Hopper Height	38" High	Waist high hopper reduces back strain.
Mixing System	4" Proprietary StS Mixing System	Fast & efficient with high shearing ability.
Flow Valves	Brass and Steel construction	Withstand the abuse of daily operations
Skid Frame	1½" steel tube with Lifting bale	Built tough for the construction trade.
Engine	23 hp air-cooled, electric start	Industrial rated for longer service life.
Pump	4" Cast iron centrifugal trash pump	Rugged & repairable for extended service life.
Pump Coupling	Direct coupled engine & pump	No expensive couplers or inserts to replace.
Vacuum Port	2" NPT Inlet	Draw Fluid into system without additional pump.
Pipe Couplers	Bolt & Snap-groove type	Fast cold weather draining of system.
Pressure Wand	Hopper maintenance wand	Removal of blockages caused by additive.
Internal Tank Jets	TurboMix™ Eductor Nozzles	Fast and effective rolling and mixing action.

Also available in Diesel (M4-D), Electric (M4-E) or Hydraulic (M4-H) models.

*** All Specifications Subject to Change Without Notice ***

Check our website for the latest products and specifications

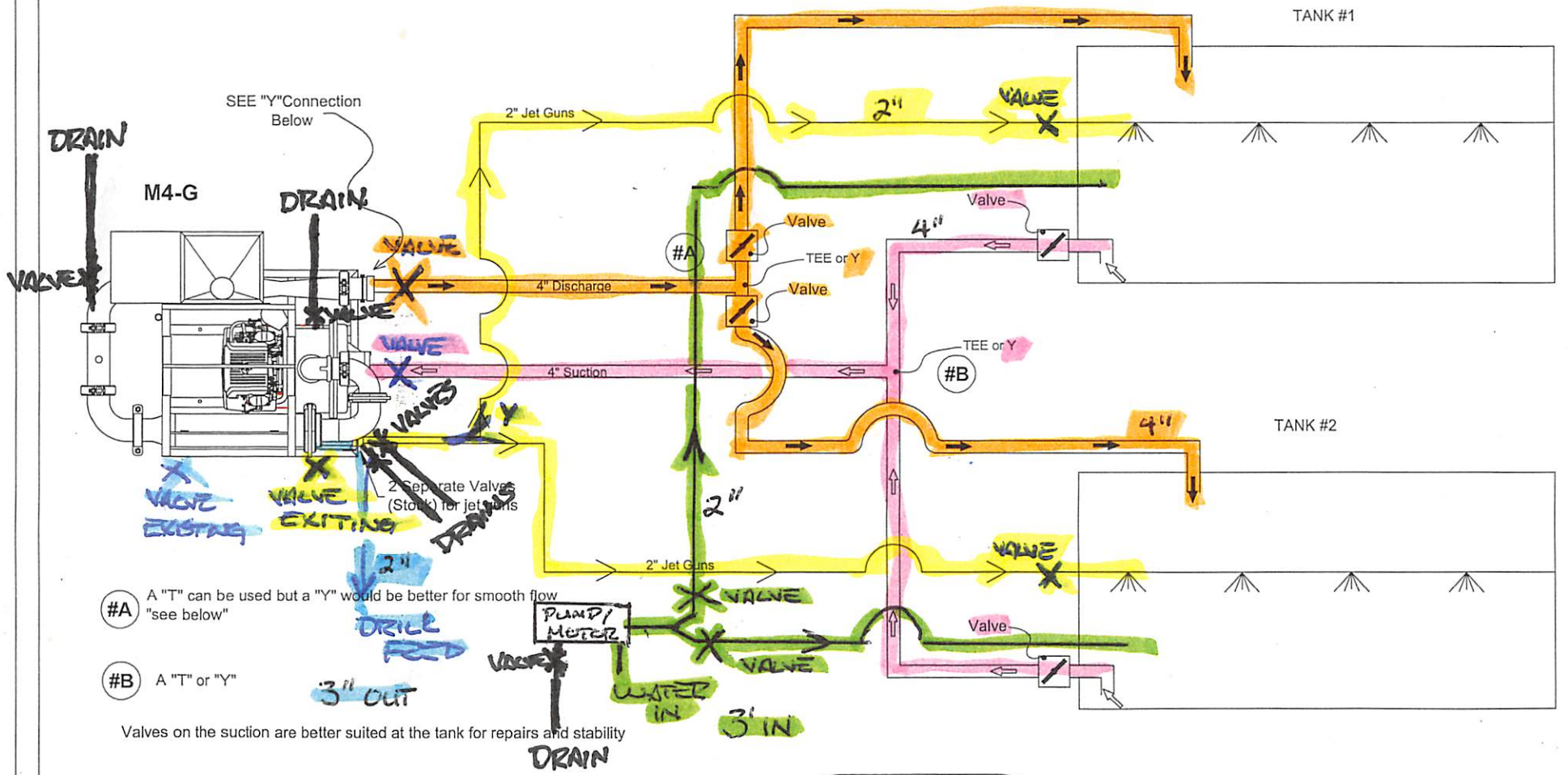
www.stsmixers.com

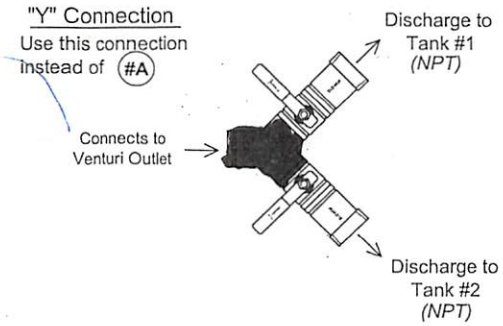
Surface to Surface Inc.

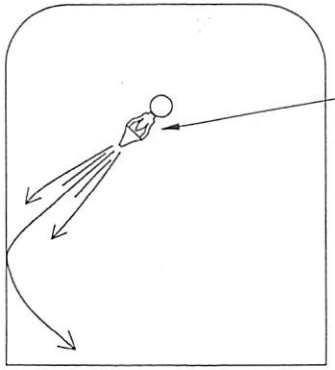
5150 Forest Road, R.R.#3, Watford, Ontario, N0M 2S0

Tel: 1-800-567-0978

07/21/20







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DWR. NUM. Arbaugh #1	DATE. 10 / 06 / 09 REV.

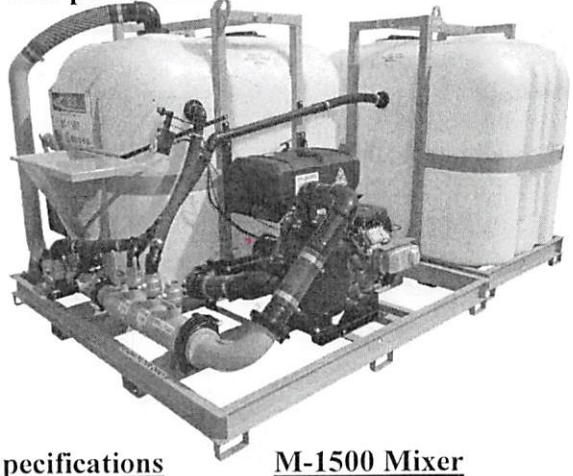
ntonite Mud Mixer Model M-1500

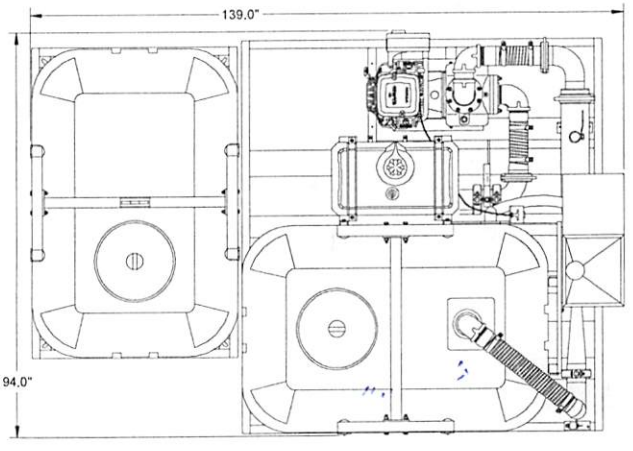
Surface to Surface Inc.

ADD SECOND WATER FILL ¾ VALVES

Features and Benefits M-1500 Mixer

The M-1500 was designed and manufactured as a dual tank system that allows the HDD contractor two methods of mixing their bentonite mud requirements. This system allows the operator to mix 750 gallons of full yield mud in less then eight (8) minutes, while holding 750 gallons of water reserve in the second tank for the next mix, or mix 1500 gallons of full yield mud in less than sixteen (16) minutes, in one large batch. The operator controls the two methods of mixing by changing the direction of flows through the piping connections using the manual operated full flow valves. The vacuum port located in the mixing tee has the ability to draw water from the second tank when being used as a reservoir and the drill fluid can than be sent to your drilling rig with-out the use of a second pump. This model has been a popular choice of HDD Contactors due to its small space saving footprint relative to its capacity. Other power drives available.





Specifications	M-1500 Mixer
Dimensions	94"W x 140"L x 77"H
Approx. Weight	2625 lbs
Hopper Height	39 inches high
Mixing System	4" Proprietary StS Mixing System
Mixing Tank (2)	750 gallon Roto-Mold Polyethylene
Skid frame (2)	5" Steel Channel, Welded
Gasoline Engine	18-23 hp Air Cooled Electric Start
Pump	4" Cast Iron Centrifugal Trash Pump
Pump Drive	Direct Coupled Engine to Pump
Fuel Tank	15 gal. Plastic Tank
Pipe Couplers	Bolt and Snap –Groove Type
Pressure Wand	Hopper Maintenance Wand
Tank Drain (2)	Bottom Tank Drains Supplied

Benefits

- Space saving design for its capacity.
- Excellent weight distribution
- Waist high hopper reduces back strain.
- Fast, efficient mixing time.
- Minimal maintenance required.
- Built for the rigors of the construction trade.
- Industrial rated for long service life.
- Rugged & Repairable for extended service life.
- No expensive couplers or inserts to replace.
- Provides a full day running on a fill up.
- Provide fast cold weather draining of system.
- Removal of blockages caused by additives.
- Provides fast cold weather tank drainage.

Also available in Diesel (M-1500D) - Hydraulic (M-1500H) – Electric (M-1500E) models.

*** All Specifications Subject to Change Without Notice ***

Check our website for the latest products and specifications
www.stsmixers.com

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Tel: 1-800-567-0978

03/29/22

ADD SECOND NAME
FILL
SAMPLES

Description, Care and Maintenance

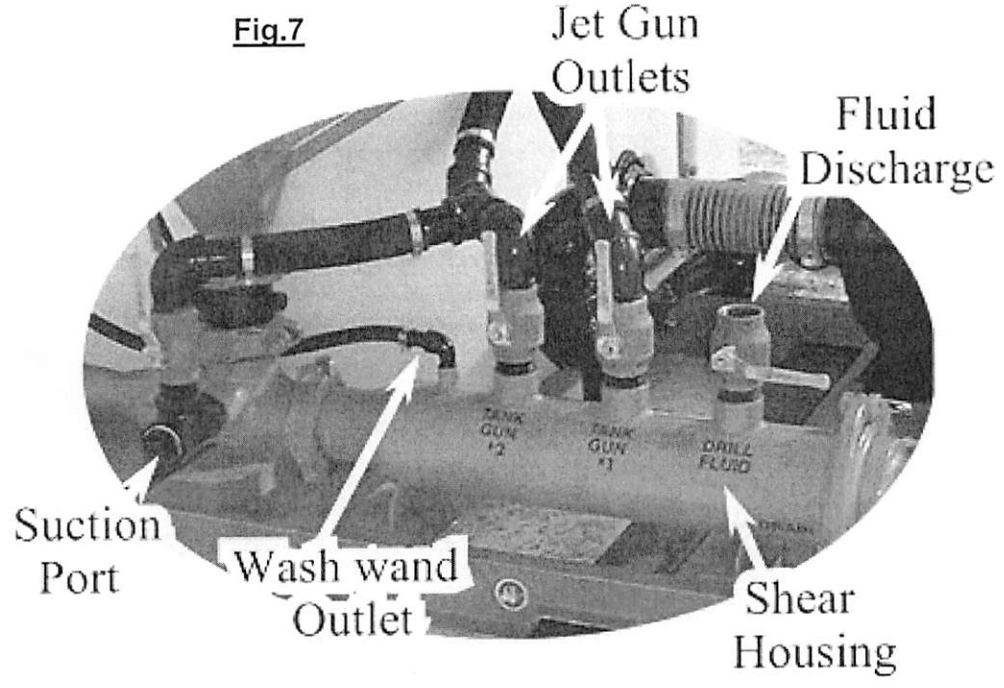
Filter / Shear System *continued*

On top of the filter / shear housing (Fig.7) are three outlets that have 2" NPT ball valves connected to them. The outlets are labeled for their functions. An outlet will be labeled and connected to the internal jet gun (explained further on in this manual) mounted inside of the 1st reservoir tank. Another outlet will be labeled and have a "T" connection. One run of the "T" connection will be connected to the internal jet gun mounted inside of the 2nd reservoir tank, the other run of the "T" connection will be routed to a valve on the suction port of the venturi mixing tee.

The final outlet will be labeled and is to be used as a discharge for the fluid after it is mixed. The discharge can be connected to another reservoir tank or directly to the drill rig. To control the flow of discharge, the ball valve can be used to regulate the flow. The speed of the engine can also be used to control the flow and pressure of the discharge. It is up to the customer to decide the piping arrangement and how they would use the discharge options. The discharge flow can have high pressure and high volume flows associated with it, and should be treated as such. If you are unsure of the installation and routing of this flow, contact Surface to Surface Inc. for more details.

Also on top of the housing is the outlet for the wash wand. The wash wand is explained in more detail further on in this manual.

Fig.7



CAUTION

WHEN TRANSFERRING FLUID to the drill rig, fluid pressure may reach or exceed 50 p.s.i. CHECK the drill rig manufacturers specifications regarding maximum inlet pressures allowed for their pump.

CAUTION

TRAPPED FLUID MAY BE PRESENT and will spill out when piping, hoses, pump or filter shear are removed.


STS
M-1500
Fluid Solutions
#2
TANK
GUN
#1
TANK
GUN
DAILY