



TM FLOODMASTER

Operations and Service Manual



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MACHINE DATA LOG / OVERVIEW

MODEL _____
DATE OF PURCHASE _____
SERIAL NUMBER _____
COMPANY NAME _____

YOUR DEALER
NAME: _____
ADDRESS: _____
PHONE NUMBER: _____

Welcome...and congratulations on the purchase of your Cleanco TM Floodmaster. This instruction manual is a guide for operating and servicing your unit. **Read this manual completely before installing or operating this unit.** This unit offers you personal convenience. All of your instrumentation and controls have been positioned to give you easy access for operation and daily maintenance.

Proper operation and service are essential to the efficient functioning of this unit. When maintained correctly, this unit will have a long, trouble-free life.

The service methods described in this manual are explained in such a manner that serving may be performed accurately and safely. Proper service varies with the choice of procedure, the skill of the mechanic, and the tools or parts available. Before attempting any repair, make certain that you are thoroughly familiar with this equipment and are equipped with the proper tools. Any questions pertaining to operation or servicing this unit should be directed to your nearest dealer.

THIS UNIT MUST BE INSTALLED BY THE DEALER FROM WHOM YOU PURCHASED IT IN ACCORDANCE WITH THE PRESCRIBED INSTALLATION PROCEDURES.

MAKE CERTAIN THAT THE WARRANTY FORM IS FILLED OUT AT THE TIME OF INSTALLATION AND RETURNED TO: ESTEAM MANUFACUTRING OR;

BY REGISTERING YOUR WARRANTY ONLINE AT: <https://esteam.com/warranty-enrollment/>

IMPORTANT SAFETY INSTRUCTIONS

When using this machine, basic precautions must always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE



These symbols mean WARNING or CAUTION. Failure to follow warnings and cautions could result in fatality, personal injury to yourself and/or others, or property damage. Follow these instructions carefully.

Read the operator's manual before installing or starting this unit. Failure to adhere to instructions could result in severe personal injury or could be fatal.



Operate this unit and equipment only in a well-ventilated area. Exhaust fumes contain carbon monoxide, which is an odorless and deadly poison that can cause severe injury or fatality. **DO NOT** run this unit in an enclosed area. **DO NOT** operate this unit where the exhaust may enter any building doorway, window, vent, or opening of any type.

This unit must be operated with the vehicle doors open in order to ensure adequate ventilation to the engine. In hot climates roof vents are recommended for added ventilation and cooling.



Never operate the TM Floodmaster with a portable gas container inside the vehicle. Doing so will increase the risk of fire and explosion. Serious injury or death may result.



DO NOT place hands, feet, hair, or clothing near rotating or moving parts. Avoid any contact with moving parts! Rotating machinery can cause injury or fatality.

⚠ WARNING:

Never operate this unit without belt guards or hoods. The high-speed moving parts, such as belts and pulleys, should be avoided while this unit is running. Severe injury, damage or fatality may result.

⚠ WARNING:

DO NOT service this unit while it is running. The high-speed mechanical parts as well as high temperature components may result in severe injury or severed limbs.

⚠ WARNING:

Never touch electrical wires or components while the engine is running. They can be sources of electrical shock.

⚠ WARNING:

Before servicing this unit, allow it to “cool down.” This will prevent burns from occurring.

⚠ WARNING:

NEVER leave the vehicle engine running while the unit is in operation.

⚠ WARNING:

Always wear hearing protection when unit is running. Always comply with local noise ordinance when operating units.

WARNING:

Dangerous Acid, Explosive Gases! Batteries contain sulfuric acid. To prevent acid burns, avoid contact with skin, eyes and clothing. Batteries produce explosive hydrogen gas while being charged. To prevent a fire or explosion, charge batteries only in well-ventilated areas. Keep sparks, open flames, and other sources of ignition away from the battery at all times. Keep batteries out of the reach of children. Remove all jewelry when servicing batteries.

Before disconnecting the negative (-) ground cable, make sure all switches are OFF. If ON, a spark will occur at the ground cable terminal which could cause an explosion if hydrogen gas or gasoline vapors are present. When disconnecting the battery, **ALWAYS** disconnect the negative (-) terminal FIRST.

WARNING:

DO NOT smoke around the unit. Gas fumes may accumulate and be ignited. The battery is also extremely flammable. This will prevent possible explosions.

WARNING:

DO NOT damage the vehicle in any manner during installation. When routing fuel lines **DO NOT** place the hose in any location where damage may occur to the hose or vehicle. Avoid any contact with moving parts, areas of high temperature, brake lines, fuel lines, muffler, catalytic converter, or sharp objects.

WARNING:

DO NOT exceed your vehicle's payload capacity. Check with the vehicle manufacturer for the gross Vehicle weight Rating (GVWR) GVWR is the maximum allowable combined weight of the vehicle, including all passengers, fuels, tools, and cargo.

CAUTION:

DO NOT operate this unit without the filters installed in the waste tank.

WARNING:

Never operate the TM Floodmaster when the vehicle is tilted more than 10 degrees in any direction. Doing so will result in improper lubrication of the internal components and will increase the risk of serious component or engine damage.

WARNING:

Never operate the TM Floodmaster with vehicle doors closed. Doing so results in extremely high temperatures inside the vehicle and will lead to serious component or engine damage.

CAUTION:

Failure to apply preventive measures towards freezing can result in system failure and loss of warranty on affected parts. Water freezes at 32° F or 0° C.

CAUTION:

Do not modify this unit in any manner. Use only replacement parts authorized by Cleanco. Modifications or use of unapproved parts could create a hazard can cause severe personal injury or fatality and will void your warranty.

⚠ WARNING:

This unit creates high temperature on some components, improper or irresponsible use may result in serious injury.

⚠ CAUTION:

Make certain that you receive complete training by the distributor from whom you purchased this unit.

⚠ WARNING:

Any modification of the TM Floodmaster may void the warranty.

TECHNICAL SPECIFICATIONS

ITEM	DIMENSION/CAPACITY
Engine speed	2850 rpm (high speed)
Vacuum pump rpm	2850 rpm
Vacuum relief valve	13" Hg
Waste tank capacity	90 gallons (340.69 lt)
Console weight	700 lbs.
Blower Belt size	BX41

Frame Dimensions		D=38" x W=22.5" x H=46.25"
Weight Console only		700 lbs
Engine - Kubota	Oil Type	SAE viscosity and SH class grades (API classifications)
	Above 25°C (77°F)	SAE30 or SAE10W-30
	0°C to 25°C (32°F to 77°F)	SAE20 or SAE10W-30
	0°C to -20°C (32°F to -4°F)	SAE10W or SAE10W-30
	Oil Capacity	3.4 L (0.90 U.S. gals) when changing oil and filter
	Engine rpm	High - 2850
		Idle - 1850-1900
Ignition	Key ignition	
Vacuum Blower - Tuthill Trilobe 4007 (Dual Splash Lubrication)	Oil Type	MD-ONE Blower Oil
	Gear End Capacity	Approx. 5.8 oz (171.5 ml)
	Drive End Capacity	Approx. 4.7 oz (139 ml)
	Blower rpm	
Standard Equipment		
	Vacuum Hose	2" Vacuum Hose - 100 ft
	Lead Vacuum Hose	10 ft x 1.5"
	Recovery Tank	90 gallon (340.69 litres)
	Battery Box	
Optional	External Pump Out (APO)	237-040
Optional	Exhaust Kit	600-235

RECEIVING YOUR TRUCKMOUNTED UNIT

DEALER RESPONSIBILITIES

The Esteam / Cleanco authorized dealer that you purchased this unit from is responsible for:

1. Correctly installing and properly securing equipment with proper hardware and underside mounting plates.
2. Checking the components and oil levels prior to starting the unit.
3. Check that all components are operating at the factory specifications.
4. Checking all hoses and accessories for correct operation.
5. Checking all tools / wands for correct operation.
6. Training you in the operation, maintenance, and safety precautions of your unit.

It is the purchaser's responsibility to become familiar with the entire Owner's Manual, most of all Warnings, Cautions, and Notices.

ACCEPTANCE OF SHIPMENT

Your TM Floodmaster truckmount was thoroughly tested, checked and inspected in its entirety prior to leaving our manufacturing facility. When receiving your unit, please make the following acceptance check:

1. The unit should not show any signs of damage. If there is damage, notify the deliverer immediately.
2. Carefully check your equipment. The TM Floodmaster should arrive with the following items as well as any optional accessories you may have ordered:

EQUIPMENT LIST

- Cleanco TM Floodmaster Console
- Recovery tank with auto shut-off
- Recovery tank vacuum hoses
- Installation mounting plates and hardware
- Hose clamps for vacuum, and fuel hoses
- 100 ft of 2" vacuum hoses
- 10ft x 1.5" Lead vacuum hose
- Battery Box

FUEL HOOK-UP KITS BY VEHICLE (If ordered)

- Dodge Promaster 2015 + 604-86392100
- Ford transit 2015 + 604-86400740
- Chevy (GM) 2003 + 604-790537

INSTALLATION REQUIRMENTS

Prior to starting installation, read the ENTIRE Installation section of this manual. Since the TM Floodmaster truckmount weighs over 700 lbs., adhere to the following recommendations prior to installing the unit.

The unit should not be installed in any vehicle rated less than $\frac{3}{4}$ -ton capacity.

DO NOT exceed the vehicles payload capacity, check with vehicle manufacturer for Gross Vehicle Weight Rating (GVWR).

If mounting the unit in a trailer, ensure that the trailer is rated for the total weight of the unit and trailer. Electric or hydraulic brakes must be provided, and strict compliance with all State/ Provincial and Federal laws must be maintained.

If mounting in a trailer, the TM Floodmaster console must be positioned so that it balances properly with respect to the trailer axle. Ten percent (10%) of the unit's overall weight (w/o accessories or water) should be on the tongue. This unit has an liquid-cooled engine, and adequate ventilation must be provided to prevent overheating. Roof vents are recommended for additional ventilation.

Cleanco does not recommend using any type of flooring materials that absorb water. This will result in rust and corrosion of the vehicle floor. Rubber mats should be removed prior to installation of the unit.

Check vacuum blower and engine oil levels prior to starting the TM Floodmaster.

Start and run the TM Floodmaster and check that all systems function properly.



This unit must be bolted to the floor of the vehicle by an authorized CLEANCO DISTRIBUTOR

LIFTING THE UNIT INTO THE VEHICLE

Because the TM Floodmaster console weighs over 700 lbs., a forklift is necessary to place the unit into the vehicle. Place the forks under the unit, using two "C" clamps; secure the console to the forks.

POSITIONING THE UNIT INTO THE VEHICLE

Vehicle vary in size and openings. All owners have different preferences on where in the vehicle they want their units positioned. Cleanco highly recommends a side door installation for the TM Floodmaster. We do not recommend a rear door installation.

FASTENING DOWN THE UNIT AND WASTE TANK

Prior to drilling any holes in the vehicle floor, check underneath the vehicle to ensure that while drilling you will not damage the fuel tank, fuel lines, or any other vital components which could affect the vehicle safety and operation.

The console and waste tank have pre-drilled mounting holes. Drill 10 holes for mounting of console and 4 holes for mounting waste tank. The console and waste tank can be used as a template for drilling holes.

Using the provided mounting hardware kit:

Insert the 3/8" x 3" GR2 hex head bolts with flat washers through the console and waste tank mounting holes. Place the mounting plates onto the bolts and secure with the 3/8" flanged nut. Tighten until the console and waste tank are firmly attached to the vehicle floor.



BATTERY CONNECTION

Battery Requirement for TM Floodmaster: 650 cranking amps

Batteries contain sulfuric acid; avoid contact with skin, eyes, and clothing. Batteries also produce explosive hydrogen gases while charging. To prevent explosion or fire, charge batteries in a well-ventilated area only. Keep sparks, open flames, and any other sources of ignition away from batteries at all times. Remove all jewelry prior to servicing batteries. Keep out of reach of children.

Attach the red positive (+) battery cable from the starter solenoid on the console to the positive (+) terminal on the battery and tighten down the nut.

Attach the black negative (-) battery cable from the ground on the console to the negative (-) terminal on the battery and tighten down the nut.

Before disconnecting the negative (-) ground cable, ensure that all switches are in the OFF position. If ON a spark could occur at the ground connection terminal, which could cause an explosion if hydrogen gas or gasoline vapors are present. ALWAYS disconnect the negative (-) terminal first.



FUEL REQUIREMENTS

Use unleaded fuel ONLY. Use only fresh, clean unleaded gasoline with a minimum octane rating of 87. Do Not use high-octane gasoline. Gasoline with up to, not exceeding 10% ethanol is acceptable.

NOTE: using other gasoline / alcohol blends including E20 and E85 will cause damage to engine components and will void warranty.

NEVER cut or slice any of the vehicle fuel lines during fuel line installation. This will result in fuel leaks and potentially dangerous conditions. Use only approved fuel hose for fuel lines. When going through the vehicle floor with fuel lines, always utilize bulkhead adaptors. This will prevent fuel leaks and ensure that hoses are not punctured by vehicle vibration abrasion.

ENGINE REQUIREMENTS

Use high quality oil of at least API (American Petroleum Institute) service class SG or higher. Do not use additives. High quality 30W oil is recommended. It is never recommended to extend oil change intervals past 200 hours.

Engine Oil Capacity		3.4 L
		3.59 US qts

TRAINING

The distributor should provide a thorough review of the operation manual with the purchaser along with complete instruction and operation of the truckmount in:

1. How the TM Floodmaster systems function.
2. All safety precautions and their importance.
3. How to correctly start and shut down the TM Floodmaster.
4. How to correctly operate the TM Floodmaster
5. Where and how often to check and change component oil levels.
6. How to do basic troubleshooting.
7. Complete review of the warranty and warranty procedures.

GENERAL INFORMATION

The Cleanco TM Floodmaster Truckmount has been designed for the professional restorer who demands a high performance-extraction unit. Dependable performance is the guiding principle in the design and construction of the Cleanco TM Floodmaster. Although the Cleanco TM Floodmaster is designed with simplicity in mind, this truckmounted extraction plant has many functions that perform simultaneously.

- Engine has to run at a continuous RPM.
- Vacuum Blower has to pull air and soiled water back from the site.
- The vacuum recovery tank stores soiled water for proper disposal.

TM FLOODMASTER SPEED SETTINGS:

- Extraction Mode 2850 engine rpm
- Idle Mode 1850 - 1900 rpm

WASTE WATER DISPOSAL

There are laws throughout North America that prohibit the dumping of soiled water from extraction equipment in any place but a sanitary treatment system.

The water recovered into your unit's recovery tank contains materials such as detergent residue and many different soil contaminants removed from flood extraction. These materials must be processed before they are safe to re-enter our streams, rivers and reservoirs.

In most cases, an acceptable method of waste water disposal is to discharge into a municipal sewage treatment system after filtering out solid material such as carpet fibers. Access to the sanitary system can be obtained through a toilet, RV dump site, etc. Always obtain permission to use these locations prior to dumping the waste tank.

Another solution to the disposal of the waste water is to equip your TM Floodmaster with the Optional TM External Pump-out (APO). The pump-out is designed to remove waste water from the TM Floodmaster's recovery tank system and actively pump the water through hoses to a suitable disposal drain.

AS PER FEDERAL, STATE AND LOCAL LAWS, DO NOT DISPOSE OF WASTE WATER INTO STORM DRAINS, GUTTERS, STREAMS, RESERVOIRS, ETC.

OPERATING THE TM FLOODMASTER IN HOT WEATHER

Cleanco recommends the following when operating the TM Floodmaster during periods of hot weather (95 ° or higher). This will ensure your TM Floodmaster continues to run at 100% capacity.

1. A minimum of 9" of clearance is required on both sides of the TM Floodmaster, when installed. Ensure no other materials are stored at the sides or on top of the TM Floodmaster. Airflow around the TM Floodmaster unit is critical for cooling the engine and other components.
2. For vans with side barn doors open the doors as wide as possible
3. When possible keep the rear doors open while the TM Floodmaster is running, this provides cross ventilation and will substantially reduce the temperature inside the van. Roof vents are recommended for additional ventilation.

OPERATING INSTRUCTIONS

NOTE: Before operating the unit, make sure you are in a well-ventilated area. Exhaust fumes from the vehicle contain carbon monoxide and are hazardous to your health and your client's health. **Do not operate the unit or the vehicle near any building doorways, windows, or openings of any kind.**

1. Check your fuel gauge to ensure you have enough fuel for the job.
2. Lay out all hoses required. When connecting hoses start from the furthest point to be extracted and work back towards the unit. This will ensure that you have the proper length required.
3. Do not connect the vacuum hose to vacuum port at this point; this will occur after unit is started.

START UP PROCEDURE



The TM Floodmaster cannot be run in the "IDLE" position for water extraction. This will void the warranty.

1. Make sure the van is parked on level ground, placed in the park position and the emergency brake is set and turn off vehicle engine.
2. Turn the throttle cable to the IDLE position.
3. Pull the engine choke out if engine is cold, turn the key switch to the start position and hold for 3 seconds or until the engine starts. Immediately push the choke cable in and let the engine idle for 2-3 minutes to warm up (do not start the unit with the throttle out at full speed, always start the unit and let it warm up at idle speed). Once warmed up throttle the engine up to the desired speed.
4. Connect the vacuum hose to the unit, and wand or extraction tool.
5. If the Automatic Pump -Out option is included in your unit, turn the APO switch to the on position.
6. You are now ready to start extracting water.

SHUT DOWN

1. Remove vacuum hoses from unit.
2. Throttle engine up to 2850
3. Allow the unit to run at high speed for 2 to 3 minutes in order to remove moisture from the vacuum blower.
4. Cap off the vacuum inlet ports on the recovery tank.
5. Spray LPS-TKX lubricant into blower lube port for 5 to 10 seconds.
6. Allow the machine to run for an additional 2 to 5 minutes under load to flush lubricant.
7. Uncap the vacuum inlet ports and run the unit at idle speed for another minute to allow vacuum blower to cool down.
8. Turn the ignition switch to the off position. (If equipped with the Optional APO turn off APO switch).
9. Remove the lift out lint basket located in the recovery tank, clean, and replace the lint basket back into the recovery tank.
10. Always drain the recovery tank at an approved disposal site.

VACUUM SYSTEM

The vacuum system is a Tuthill Trilobe 4007 positive displacement rotary lobe blower. This high performance blower provides incredible airflow and water lift producing maximum extraction. The blower is factory set for maximum efficiency and longevity. The performance and life of the blower greatly depends on the care and proper maintenance it receives.

Due to the close tolerances of the internal lobes and the housing of the blower, solid objects entering the inlet of the blower can damage the interior.

To prevent this, Cleanco installs stainless steel filter screens on the vacuum inlet inside the vacuum recovery tank. The stainless steel filters should be removed daily or after every job and cleaned. When reinstalling the filter only thread filter on until finger tight. The lint basket should be removed and cleaned after every job. If lint basket is not clean, it will affect the performance of your machine. The vacuum relief valve needs to be checked bi-weekly to ensure proper functionality. The blower is factory set for maximum efficiency and longevity at 13”Hg. Never exceed 14”Hg on the gauge. Damage may occur to the system if 14”Hg is exceeded. For further information on the Tuthill Trilobe blower, refer to the enclosed Tuthill Blower Manual. Foam passing through the vacuum blower can lead to serious problems with the TM Floodmaster. Keep the waste tank free of foam, this may require the use of a defoamer. The waste tank contains a high level shut-off switch; however the switch will not be activated by foam.

ELECTRICAL SYSTEM

The Cleanco Compact electrical system has been specifically designed with simplicity in mind. There are multiple wiring harness that connect all operations of the unit. This harness is complete with specially designed plug ends, which enable service centers easy fuse panel access and service if necessary. All wiring is coated to protect against corrosion from moisture or water spillage.



NOTE: Whenever working on wiring system power side of units battery should be disconnected for safety.

TM FLOODMASTER REAR BEARING SUPPORT

The Hayes style engine rear bearing support is a precision engineered and balanced system that transfers power from the unit's engine to the vacuum system, which drives the vacuum blower. This unique system eliminates any side torque generated from the vacuum blower. An outer casing with a large bearing protects the engine shaft and engine bearing. The Hayes system is designed to withstand extremes of heat and friction without breaking down. The Hayes system has two grease zerk fittings one at the front of the shaft and one at the top of the bearing. **These two bearings require greasing every 250 hours of operation. The recommended grease to be used to grease the bearings is SKF LGMT 3/0.4 bearing grease.**



TM FLOODMASTER UPPER FRONT PANEL

HOUR / TACHOMETER METER: Reads the operating time of the unit when the unit is turned off and the engine speed when the engine is running.

IGNITION SWITCH: The engine ignition switch provides ignition to start the engine when the key is inserted and turned.

CHOKE CONTROL: The engine choke control knob pull to open the choke for engine ignition.

THROTTLE CONTROL: The engine throttle control knob. Turn counter-clockwise to open the throttle (faster speed), clockwise to close the throttle (slower speed). For emergency slow-down, depress the center button and push the throttle control in.

APO SWITCH: Is a pre-wired switch for the **optional** Cleanco TM External Pump Out. Part number 237-040.

AUXILIARY SWITCH: Is a pre-wired switch used to turn an auxiliary item on or off, if an optional item, such as a lighting kit has been installed.

EXHAUST OUTLET: This is where the engine and blower exhaust from the unit. Exhaust fumes contain carbon monoxide, which is an odorless deadly poison that can cause severe injury or fatality. **DO NOT** run this unit in an enclosed area or with vehicle doors closed. **DO NOT** operate this unit where the exhaust may enter any building doorway, window, vent, or opening of any type. (OPTIONAL: Thru Floor Exhaust Kit P/N 600-235)

RECOVERY TANK

The recovery tank of the Cleanco™ FLOODMASTER incorporates many unique features to protect your equipment, and save you time. The tank is made from 3/16ths powdered coated marine aluminum and contains several baffles to insure strength and durability. The recovery tank holds 90 U.S. gallons of soiled water solution, giving you longer cleaning intervals between dumping. The safety and convenience features built into the recovery tank include a high water shut-off switch, a built-in lint basket, sloped tank bottom and stainless steel blower protection filters. The high water shut-off is located at the highest point in the recovery tank, giving you full usage of the tanks capacity. The high water shut-off cuts the power to the engine fuel solenoid when the tank is full, protecting the vacuum blower from damage. The lint basket prolongs the life of the air filtration system, and makes draining soiled water easier with less clogging and debris. The stainless steel blower protection filters guard against any small debris entering into the blower chamber, which could damage the blower itself. The inline vacuum breaker adds years to the vacuum blowers life by reducing stress caused plugged filters and limited air intake. The recovery tank also has two access lids for easy access to the lint basket and the stainless steel blower protection filters. These filters require regular cleaning on a daily basis as a minimum.



MAINTENANCE TM FLOODMASTER

To avoid costly repairs and downtime, it is imperative to develop and practice good maintenance procedures. These procedures must be performed on a daily, weekly, monthly, quarterly and bi-annual schedule.

DAILY

- Check engine oil level. (2) Fill to proper level.
- Check vacuum blower oil level. Fill to proper level. Do not overfill. (1)
- Check engine radiator coolant. Fill to proper level. **(Check only when engine is cool)**
- Ensure to lube blower with LPS-TKX lubricant at the end of each job with unit running.
- Clean vacuum tank lint basket. **(Should be cleaned after every job)**
- Inspect and clean stainless steel blower filters, replace if required (1).
- Rinse out vacuum hoses with fresh water.
- If your unit has an APO inspect and remove any debris or sediment. (1)
- Inspect the unit for water and oil leaks, loose electrical connections, repair as needed.

WEEKLY

- Clean recovery tank thoroughly with pressure washer.
- Inspect vacuum relief valve, clean and lubricate.
- Check vacuum blower belts and fan belt for wear and proper tension. Adjust if needed.
- Check all hoses and wiring for wear, secure if needed.
- Check all nuts and bolts. Tighten as needed.
- Change engine oil and filter after the first 50 hours of operation.
- Change the engine oil and filter every 200 hours. (Every 100 hours if operating in high ambient temperatures).

MONTHLY

- Check engine air cleaner for damaged, dirty, or loose parts. Replace as needed.
- Inspect drive belts for wear. Replace as needed.
- Check battery fluid level and battery terminals. (1)
- Check all fastener tightness on all components. Tighten as needed.

QUARTERLY

- Check all fuel lines. Repair or replace as needed.
- Clean and gap the spark plugs to 0.031-0.035" (0.8-0.9 mm) Replace if excessive carbon build up is visible.
- Grease Hayes bearing support. (or at 250 hours which ever comes first)
- Change vacuum blower oil after the first 100 hours. (Every 200 hours thereafter).

TM FLOODMASTER SERVICE INTERVAL CHART

SERVICE INTERVALS - EVERY 30 HOURS

Belt Tensioner	Adjust belt tensioner after first 10 hours of operation, then monthly
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SERVICE INTERVALS - EVERY 50 HOURS

Hoses	Inspect hoses for wear, damage. Replace if damaged.
Engine	Change engine oil after first 50 hours of operation.

SERVICE INTERVALS - EVERY 100 HOURS

Belts	Re-Tension all belts
Battery	Clean Battery Terminals
Vacuum Relief Valve	Check and adjust vacuum relief valve up to 13"Hg. Lube the relief valve shaft.
Engine	Check spark plugs. Use only OEM spark plugs.

SERVICE INTERVALS - EVERY 200 HOURS

Engine	Change oil and oil filter.
Engine	Check engine air filter.
Exhaust	Check engine exhaust for leaks, tighten fittings as needed.
Vacuum Blower	Drain, flush, and replace oil.

SERVICE INTERVALS - EVERY 250 HOURS

Hays Bearing Support	Grease fittings. (zerk fitting).
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SERVICE INTERVALS - EVERY 500 HOURS

Engine	Replace in-line fuel filter
Pulley and hubs	Check all pulleys and hubs for proper tightness.
Unit	Thoroughly inspect the unit's mounting bolts on engine, and vacuum blower.

SERVICE INTERVALS - EVERY 1000 HOURS

Engine	Replace spark plugs,. Use only OEM spark plugs.
Engine	Replace air filter.
Engine	Valve adjustment .0057 - 0073 in.
Belts	Replace all belts.

TROUBLE SHOOTING

ENGINE WILL NOT START (DOES NOT TURN OVER)

PROBABLE CAUSE	SOLUTION
Loose or corroded battery connections.	Clean, tighten or replace battery terminals.
Dead battery	Recharge or replace battery.
Defective ignition switch	Test ignition switch for power going into the switch. If there is power going in, but none coming out, replace switch.
Defective starter Motor.	Test the starter motor. Replace if required.
Vacuum blower seized.	Refer to the vacuum blower manufactures service and repair manual

STARTER TURNS OVER BUT ENGINE WILL NOT START

PROBABLE CAUSE	SOLUTION
Recovery waste tank is full.	Empty recovery waste tank.
Lose or broken wires leading to recovery waste tank float switch.	Repair or replace broken electrical connections.
Defective recovery waste tank float switch.	Replace if necessary.
Defective fuel pump.	Replace fuel pump.
Engine is malfunctioning.	Refer to Kubota engine Operation and Maintenance Manual.

ENGINE STOPS RUNNING DURING NORMAL OPERATION

PROBABLE CAUSE	SOLUTION
Recovery waste tank is full.	empty recovery waste tank.
Recovery waste tank float switch defective.	Replace if necessary.
Engine is out of gasoline.	check the fuel tank level
Defective fuel pump.	Replace fuel pump.
No ignition in the engine or the engine is malfunctioning.	Refer to the Kubota Engine Operation and Maintenance Manual.

VACUUM BLOWER TROUBLE SHOOTING

LOSS OF VACUUM (while cleaning, engine RPM is normal but vacuum is lower than expected)

PROBABLE CAUSE	SOLUTION
Vacuum hoses are damaged or kinked causing a suction leak.	Inspect hoses, repair or replace.
Waste tank gasket not sealing or not positioned correctly.	Inspect lid gaskets, repair seal or replace gaskets. Re-position lids.
Vacuum gauge is giving an incorrect reading.	Check vacuum tubing between from the vacuum gauge, replace if necessary.
Vacuum hoses are plugged.	Unplug vacuum hoses.
Recovery waste tank filters or lint basket is plugged.	Clean or replace filters, or lint basket.
Recovery waste tank ball valve drain is damaged or left open, causing a vacuum leak.	Drain the recovery waste tank. Close the ball valve drain valve. Replace valve if necessary.
Loose or worn vacuum blower drive belts.	Tighten belts, or replace belts if necessary.
Vacuum Relief valve requires adjustment.	Re-adjust vacuum relief valve, do not exceed 13"Hg
Vacuum blower is worn out.	Replace the vacuum blower.

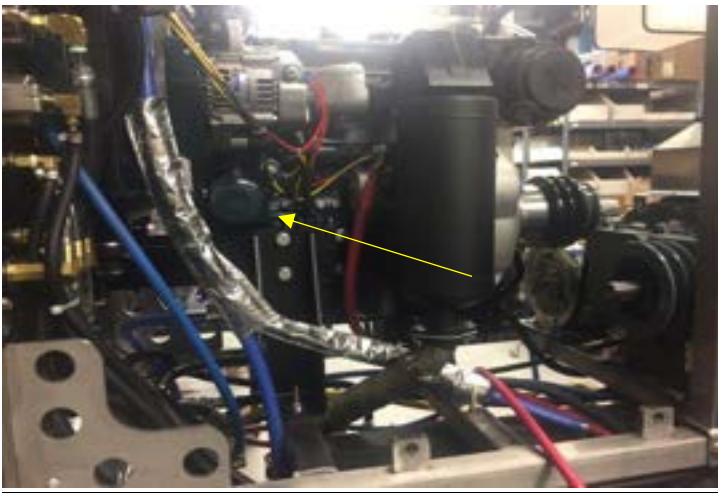
EXCESSIVE VACUUM (while cleaning, engine RPM is normal but vacuum is higher than expected)

PROBABLE CAUSE	SOLUTION
Vacuum blower relief valve needs adjustment.	Re-adjust vacuum relief valve. Do not exceed 13" Hg.
Improper throttle adjustment.	Adjust throttle to set desired vacuum pressure.



Engine Oil

The engine oil needs to be checked on a daily basis. Arrowed in the photo is the engine dipstick. Using a clean rag, slowly remove the dipstick and wipe it clean. Then slowly remove it again to check the engine oil level. The engine oil fill cap is located on the top of the engine towards the radiator.



Engine Oil Filter

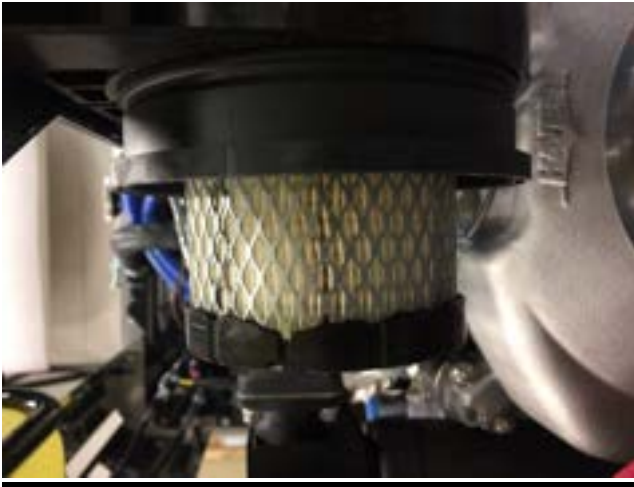
The engine oil filter is located on the right hand side of the machine. When changing the oil filter, it is a good idea to have a clean rag placed under it to prevent any oil from spilling onto the machine.

Oil filter part number 560-415



Engine Air Filter

The engine air filter is located on the back left hand side of the machine. To check the filter, undo the 2 clips that hold the rear cap in place. It is important to remember to inspect the filter on a regular basis and replace it when needed.



Engine Air Filter

The internal air filter element will be snug when trying to remove it. A slight twist while pulling it out will free it up. Make sure when you replace the filter to firmly push it back into a position that it seats properly.

Air Filter Element part number
560-410



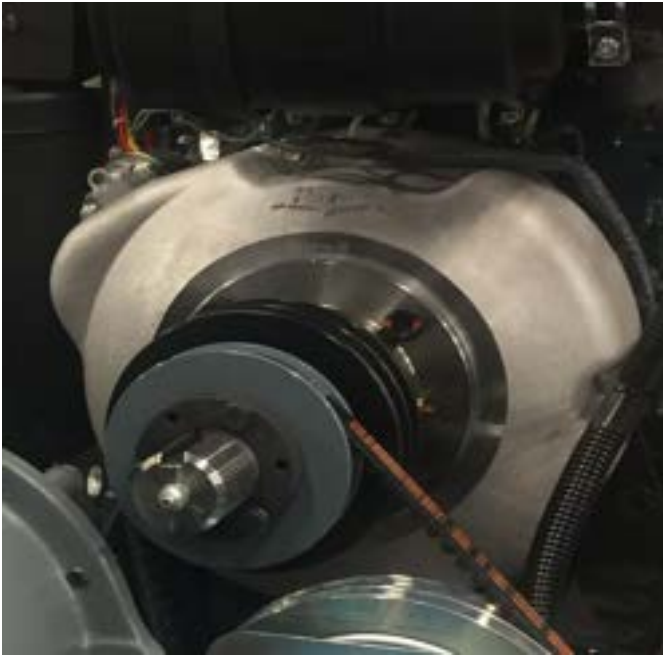
Engine Radiator

As part of your daily maintenance routine, you will need to check the engine antifreeze fluid level. Make sure this procedure is performed when the engine is cool. ***Do not by any means try to open the radiator cap while the machine is hot! Serious injury can occur.***

Remove the radiator cap and visually inspect the fluid level. The level should be up to the inside top of the radiator. Do not use the radiator overflow jug as a gauge to check the level of the fluid in the radiator. The overflow jug is used to catch the unused fluid when the engine is hot.

NOTE: Do not by any means try to open the radiator cap while the machine is hot! Serious injury can occur





Hays Bearing Support Shaft

The Hays bearing support shaft takes the load off the rear bearing of the Kubota engine, giving the engine extended life. The zerk grease fitting requires greasing every 250 hours. Grease with SKF LGMT3/0.4 bearing grease. Grease part number 707-005



Waste Tank Blower Inlet Filters

On the inside of the waste tank are two filters. These filters prevent any particles from entering the vacuum blower. It is very important to remove and clean these filters on a weekly basis, or more if needed. Before reinstalling the filters apply some lubricant / grease on the thread of the filters and only hand tighten the filters, this makes it easier to remove them the next time. Blower Filters Part Number 560-205.



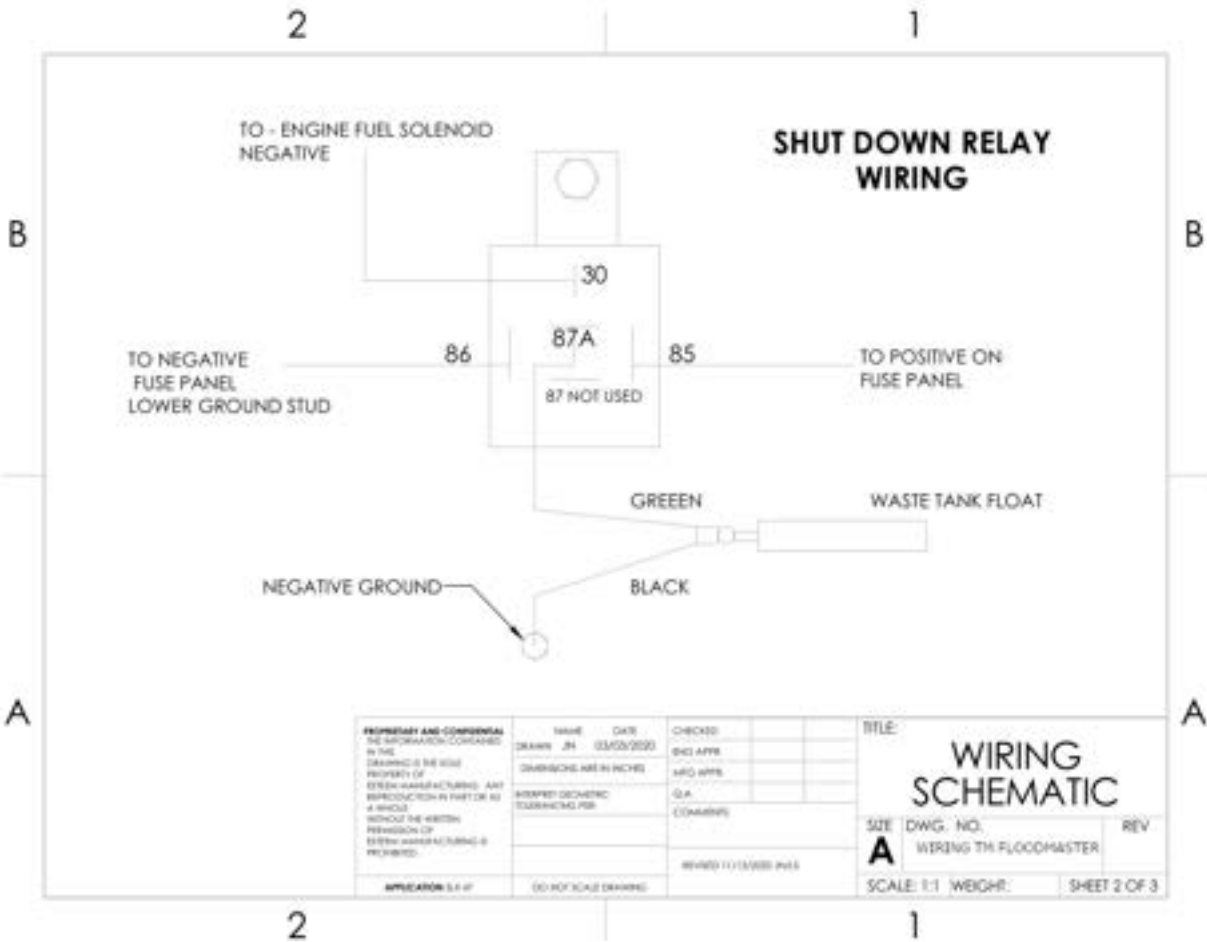
Waste Tank Lint Basket

The lint basket catches the heavier debris such as carpet fibers as the soiled water enters the waste tank. The lint basket requires emptying after every job. If not emptied after every job this will affect the performance of your machine and can cause damage to several components. Lint Basket Part Number 560-370.



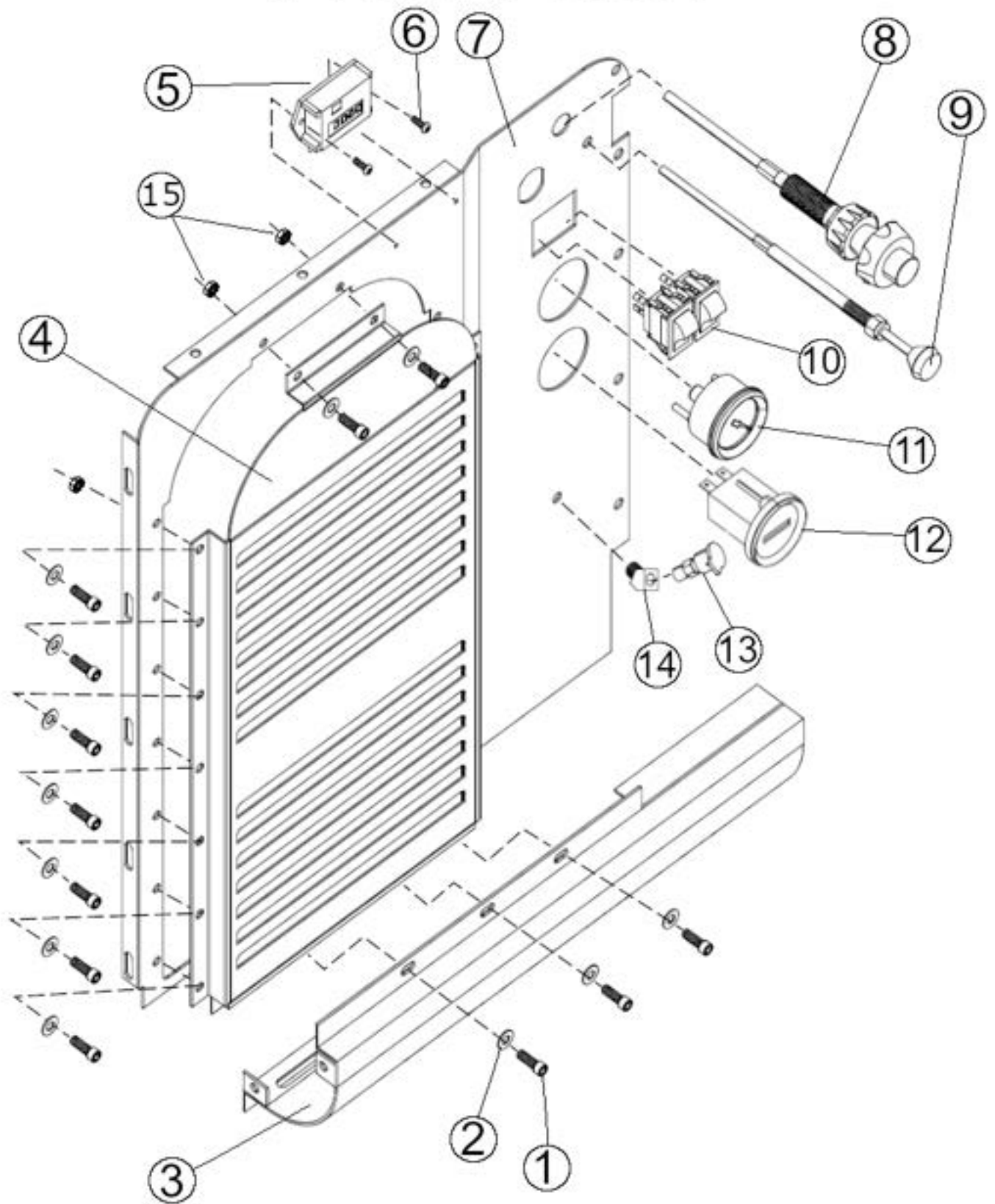
Fuse Panel

You will notice the fuse panel located on the left side of the middle cross member. This fuse panel creates a fusible link between the engine and all other components on the unit. If you need to replace a fuse, make sure you use the correct amp fuse as a replacement.

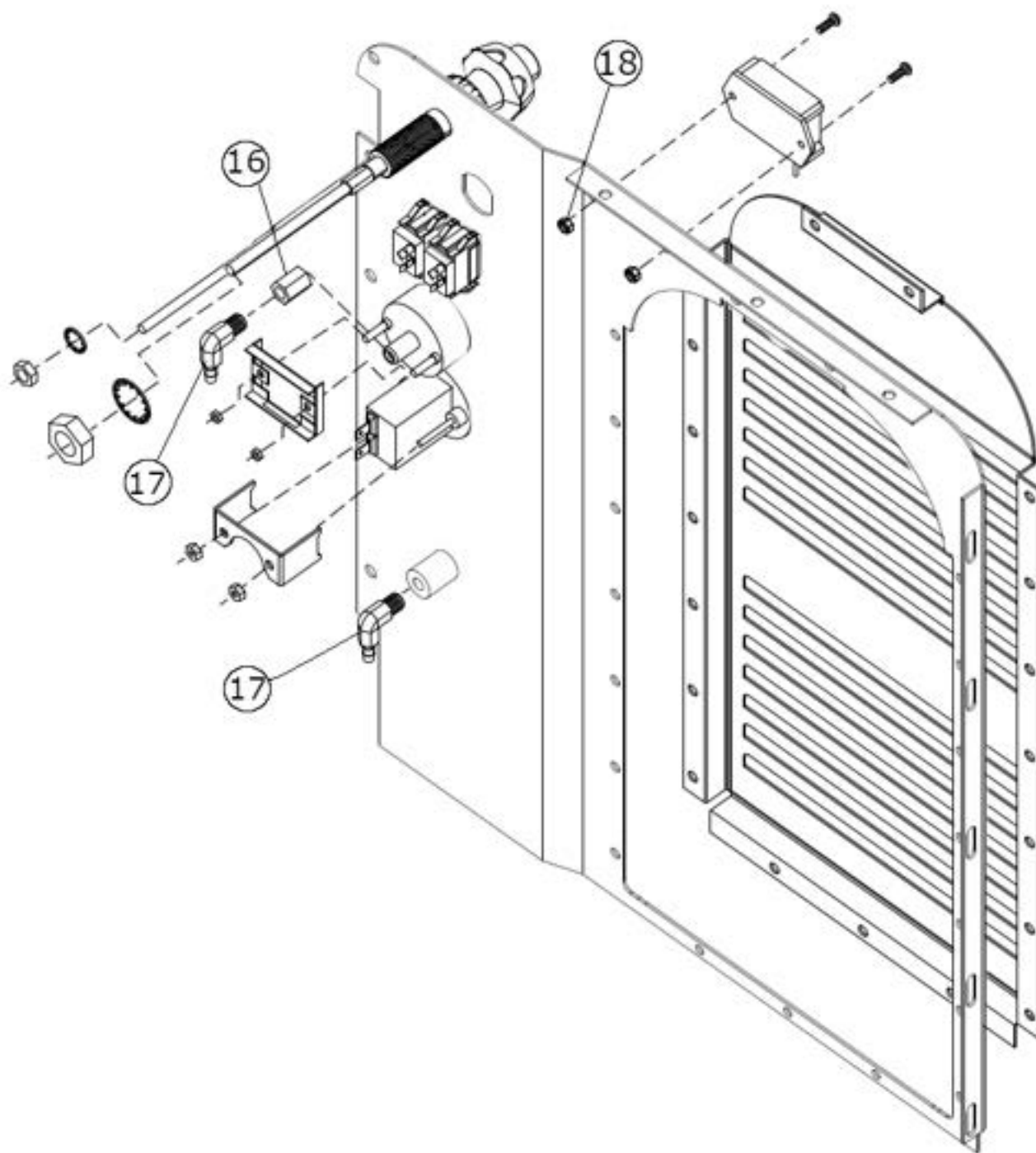


IMPORTANT AND COMPULSORY THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ERFEN MARINE EQUIPMENT. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ERFEN MARINE EQUIPMENT IS PROHIBITED.	NAME: JH DATE: 03/05/2020 DIMENSIONS ARE IN INCHES	CHECKED: ENG APPR MFG APPR QA COMMENTS:	TITLE: WIRING SCHEMATIC	
	INTERNET SCHEMATIC TO: BUSHING FOR	REVISED TO: (SEE PAGE)	SIZE: A DWG. NO.: WIRING TH FLOODMASTER	REV:
	APPLICATION: S.A. 47 (DO NOT SCALE DRAWING)	SCALE: 1:1 WEIGHT:	SHEET 2 OF 3	

Front Panel



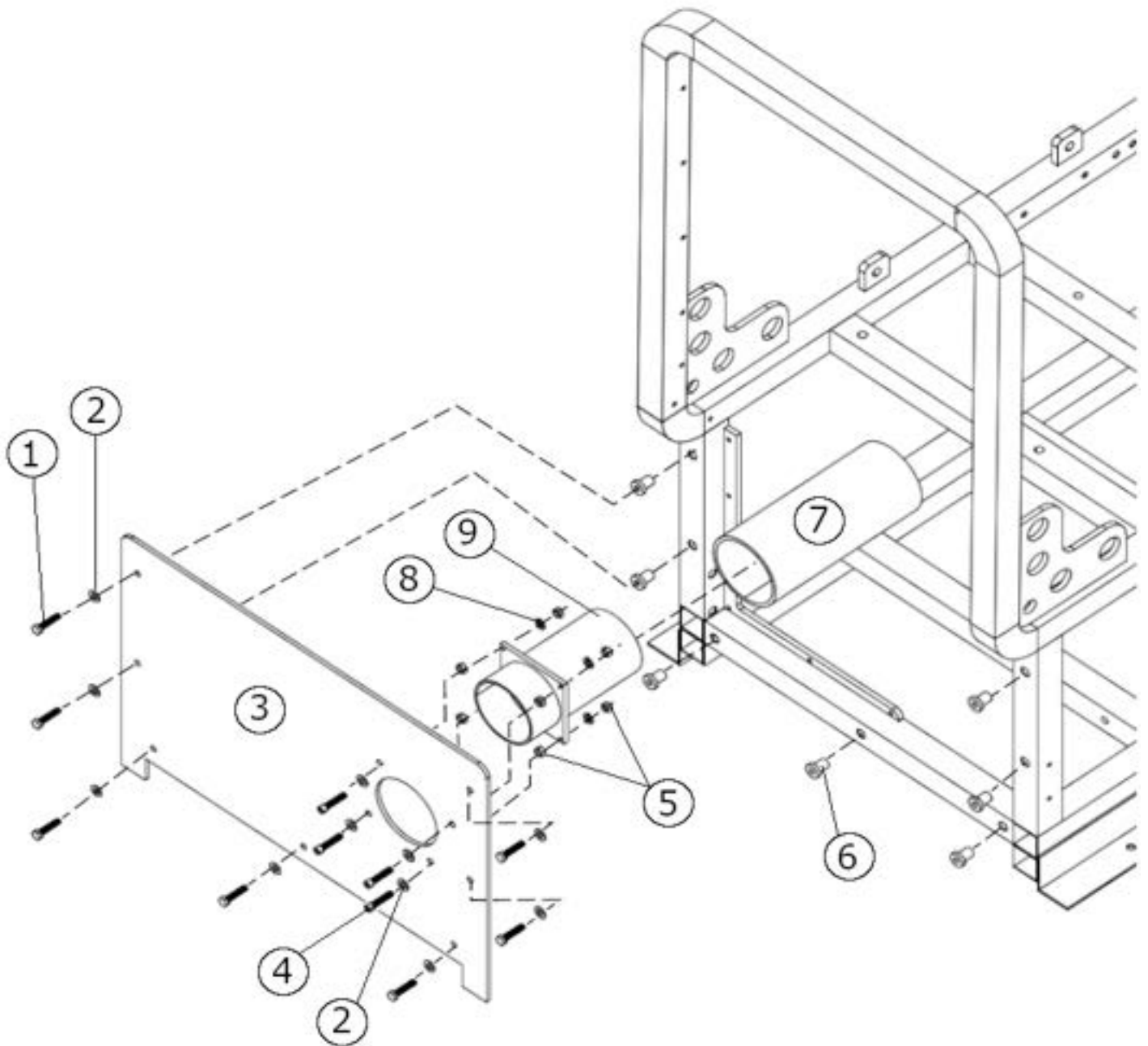
Front Panel (BackSide)



Top Panel (Front & Back)

REF	PART NO.	DISCRIPTION	NOTES
1	410-415	CS, 1/4 X 20 X 1/2 SS SOC	
2	415-125	FW, 1/4 SS	
3	845-422	CURVED FRONT PANEL FM	
4	845-405	UPPER GRILL PANEL SLX	
5	360-216	TINY TACH	
6	410-130	MS, 8-32 X 1/2 PAN PHIL SS	
7	845-441	FRONT PANEL TM FLOODMASTER	
8	352-095	THROTTLE CABLE, KUBOTA	
9	352-100	CHOKE CABLE, KUBOTA	
10	305-085	SWITCH, ROCKER - WHITE	
11	360-131	GUAGE, VAC - CLEANCO	
12	360-112	HOUR METER, CLEANCO	
13	551-075	VAC LUBE PORT	
14	555-180	ELBOW 45, 1/8" STREET EXTRUDED	
15	400-038	NUT, 1/4 x 20 K-LOK	
16	555-130	COUPLING, 1/8"	
17	555-320	HOSE BARB 90, 1/4 BARB X 1/8 MPT	
18	400-125	LOCKNUT, 8 X 32 NYLON S.S.	

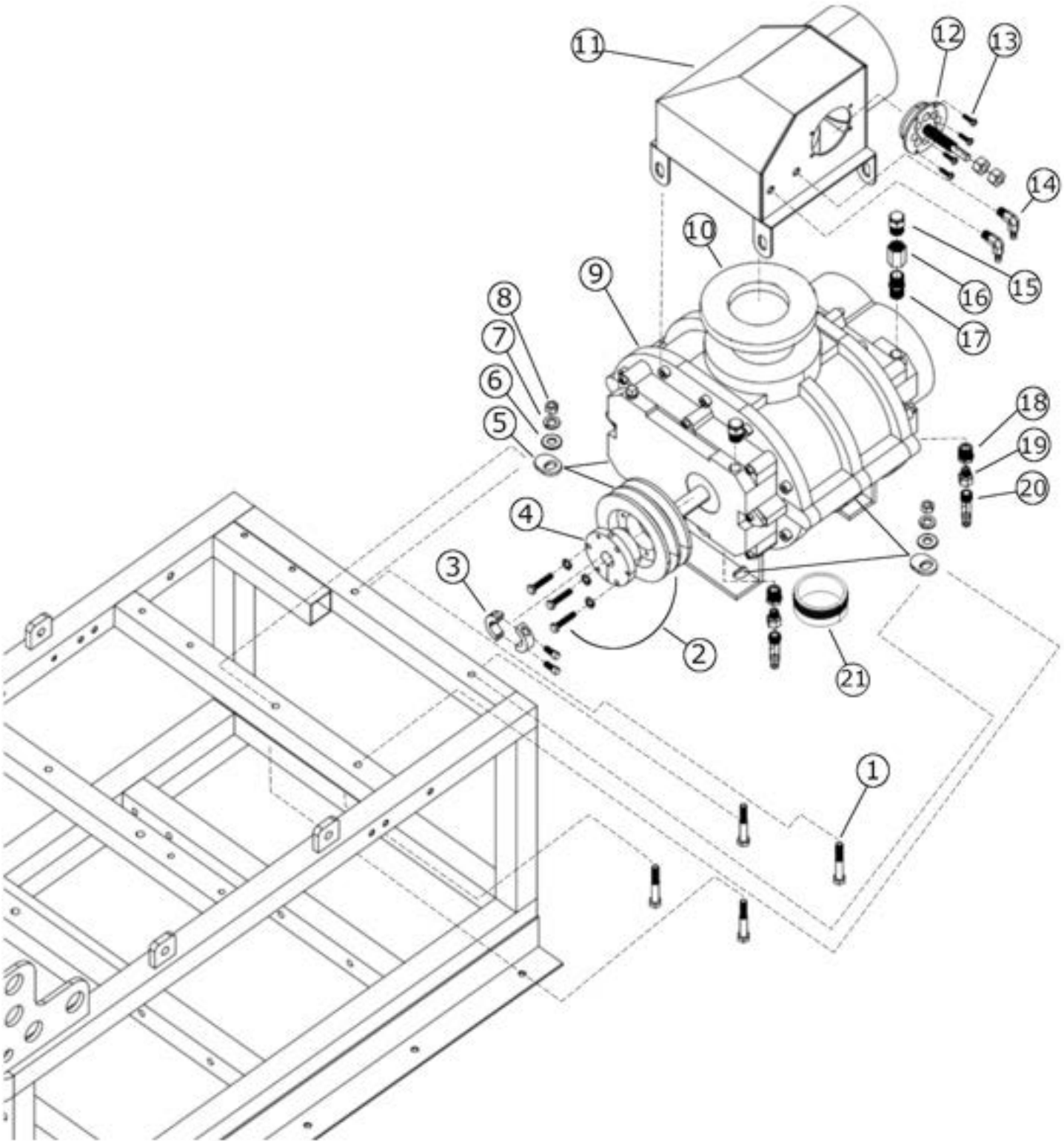
Lower Front Panel



Lower Front Panel

REF	PART NO.	DISCRIPTION	NOTES
1	405-010	BOLT, 1/4 X 1 SS	
2	415-125	FW, 1/4 SS	
3	845-411	LOWER FRONT PANEL FM	
4	410-420	CS, 1/4 X 20 X 1 1/4 SS SOC	
5	400-010	HEX NUT, 1/4 x 20 ZINC	
6	400-250	WELL NUT, 1/4 X 20 NEOPRENE	
7	572-220	SILICONE HOSE, 3 1/2"	
8	415-025	LW, 1/4 SS	
9	850-140	EXHAUST PLATE & TUBE, FM	

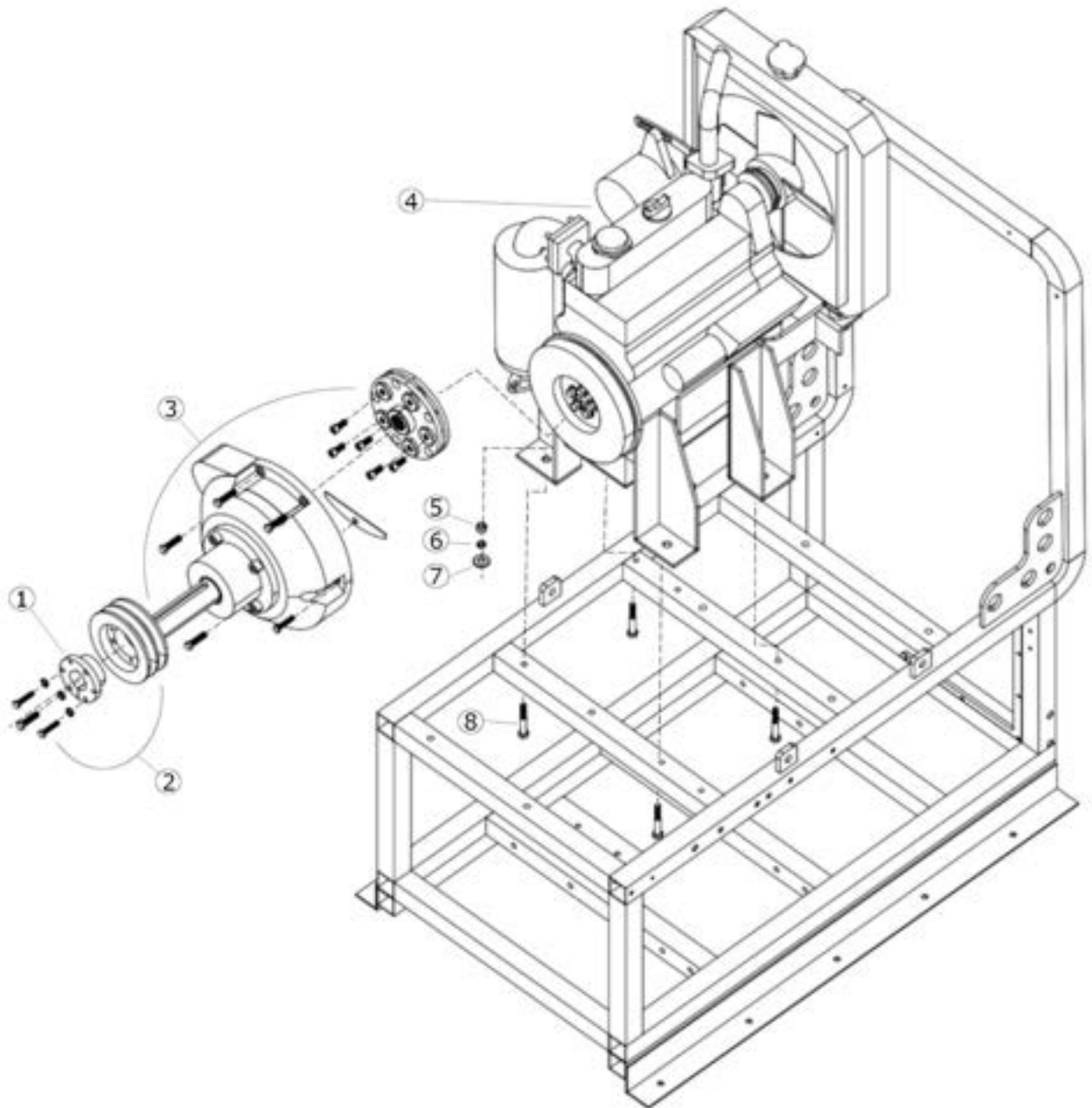
Blower & Frame ASM



Blower & Frame ASM

REF	PART NO.	DISCRIPTION	NOTES
1	405-137	BOLT, 3/8 X 2 1/2 GR8	
2	385-210	PULLEY, KUBOTA & BLOWER	
3	380-514	LOCKING COLLAR, 7/8	
4	385-230	BUSHING, BLOWER SLX 47	
5	415-370	WASHER, BLOWER	
6	415-130	FW, 3/8 ZINC	
7	415-030	LW, 3/8 ZINC	
8	400-015	NUT, 3/8 X 16 ZINC	
9	358-505	TUTHILL 47 DSL TRI-LOBE BLOWER	
10	475-311	GASKET, 47 INTAKE SCOOP VR2 TUTHILL	
11	358-548	INTAKE SCOOP 47 SLIDE VR2 TUTHILL	
12	620-405	VAC BREAKER ASSY (CLEANCO)	
13	410-205	MS, 10-32 X 1/2 PANPHIL SS	
13A	400-130	LOCKNUT, 10 X 24 NYLON SS	NOT SHOWN
14	555-320	HOSE BARB 90, 1/4 BARB X 1/8 MPT	
15	VENT	NOT SOLD SEPARATELY. COMES WITH BLOWER	
16	555-134	COUPLING, 3/8	
17	555-274	HEX NIPPLE, 3/8" X 1 1/2" LONG	
18	555-022	BUSHING, 3/8 M x 1/8 F	
19	555-510	REDUCING ADPT, 1/4 FPT X 1/8 MPT	
20	555-324	HOSE BARB 90, 3/8 BARB x 1/4 MPT	
21	358-258	EXHAUST PORT TM FLOODMASTER	

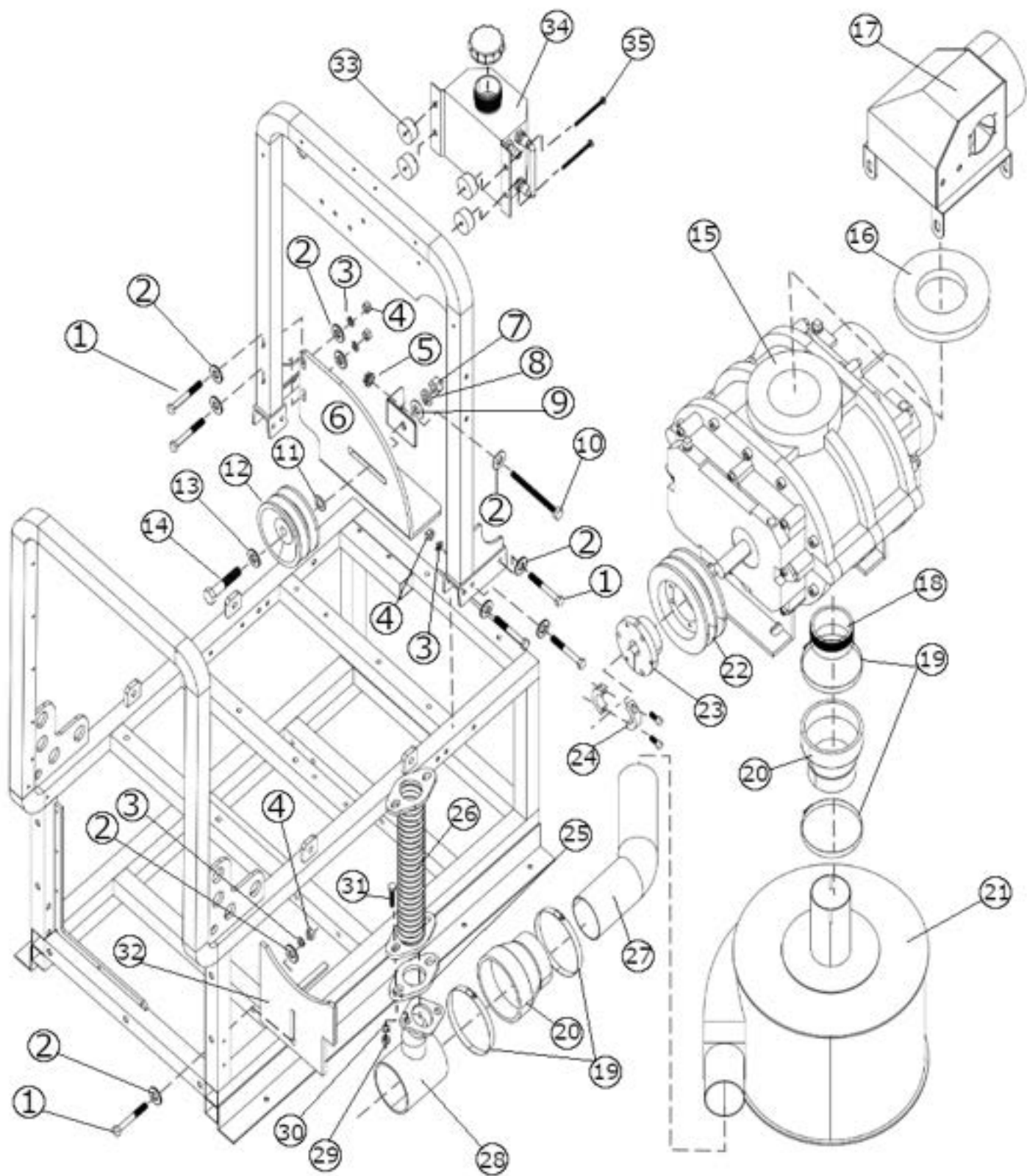
Engine & Hayes Support Shaft



Engine & Hayes Support Shaft

REF	PART NO.	DISCRIPTION	NOTES
1	385-215	BUSHING, KUBOTA/BLOWER	
2	385-210	PULLEY, KUBOTA & BLOWER	
3	380-300	HAYES SUPPORT SHAFT	
4	375-100	ENGINE, KUBOTA 32 HP GAS WG972G	
5	400-015	NUT, 3/8 X 16 ZINC	
6	415-030	LW, 3/8 ZINC	
7	415-130	FW, 3/8 ZINC	
8	405-137	BOLT, 3/8 X 2 1/2 GR8	
9	397-029	BELT, BX41 (BLOWER BELT)	NOT SHOWN

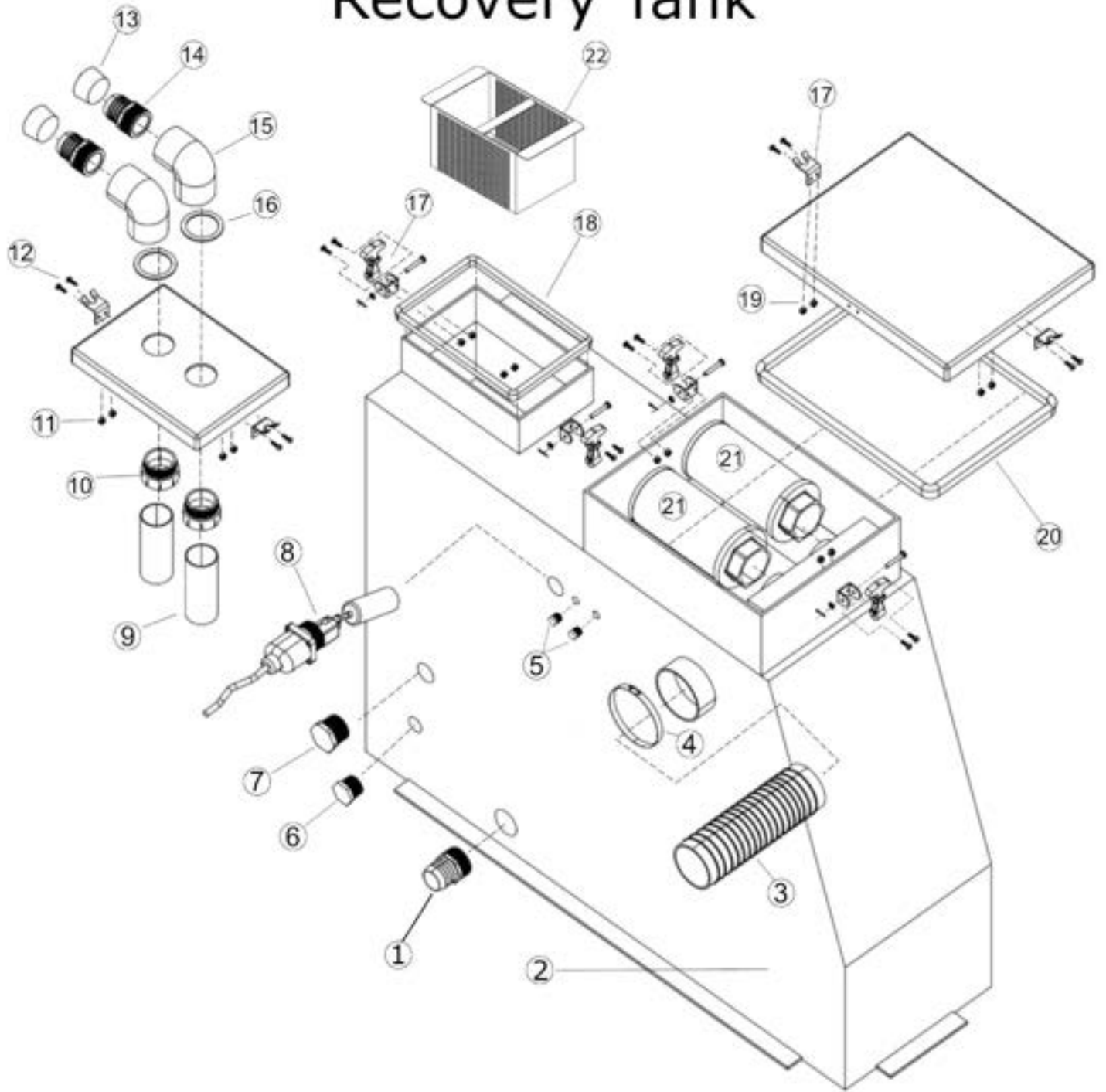
Tensioner, Frame & Silencer



Tensioner, Frame & Silencer

REF	PART NO.	DISCRIPTION	NOTES
1	405-220	BOLT, 5/16 X 2 1/2 GR8 ZINC	
2	415-130	FW, 3/8 ZINC	
3	415-030	LW, 3/8 ZINC	
4	400-045	HEX NUT, 5/16 ZINC	
5	400-016	NUT, 3/8 FLANGED	
6	465-653	BRKT, TENTIONER FM	
7	400-050	HEX NUT, 1/2 ZINC	
8	415-050	LW, 1/2 ZINC	
9	415-152	FW, 1/2 SAE ZINC	
10	405-156	BOLT, 3/8 X 4 ALLTHREAD ZINC	
11	415-157	FW, 1/2 AN S/S	
12	385-175	PULLEY,2BK36-IDLER W/BUSHING	
13	415-130	FW, 3/8 ZINC	
14	405-316	BOLT, 1/2 X 2 1/2 GRD 8	
15	358-505	TUTHILL 47 DSL TRI-LOBE BLOWER	
16	475-311	GASKET, 47 INTAKE SCOOP VR2 TUTHILL	
17	358-545	INTAKE SCOOP 45 SLIDE	
18	358-258	EXHAUST PORT 47 FM	
19	425-045	CLAMP, #72 HOSE (4 3/4 ID)	
20	572-225	SILICONE HOSE, 2 1/2 x 3 1/2	
21	850-010	COWL SILENCER	
22	385-210	PULLEY, KUBOTA & BLOWER	
23	385-230	BUSHING, BLOWER	
24	380-514	LOCKING COLLAR, 7/8	
25	475-335	GASKET, EXHAUST FLANGE	
26	850-117	EXHAUST HOSE ASSY 10"	
27	582-011	ELBOW, 45 X 3" PIPE FM	
28	850-116	EXHAUST PORT FM	
29	400-005	HEX NUT, 1/4 x 20 SS	
30	415-025	LW, 1/4 SS	
31	405-021	BOLT, 1/4 X 1 1/4 GR8	
32	465-526	BRKT, EXHAUST HOSE FM	
33	498-104	FOOT RUBBER	
34	600-230	RESERVOIR, COOLANT SLX	
35	410-175	MS, 10-24 X 2 1/2 RH RB ZINC	

Recovery Tank



Recovery tank

REF	PART NO.	DISCRIPTION	NOTES
1	590-420	PVC HOSE BARB, 2"HB X 2"MPT	
2	860-545	REC TANK, SLX BARE	
3	575-038	DUCTING HOSE 4 1/2 ID	
4	425-045	CLAMP, #72 HOSE (4 3/4 ID)	
5	555-454	PLUG, 3/8 MPT HEX HEAD	
6	582-210	PLUG, 1" THREADED	
7	582-212	PLUG, 1 1/4 THREADED	
8	305-105	SWITCH, SHUT OFF/ CAD & REC TANK	
9	595-010	ABS PIPE, 2"	
10	588-015	ABS ADPT 2", S X MPT	
11	400-125	LOCKNUT, 8 X 32 NYLON S.S.	
12	410-125	SMS, 8 X 5/8 PAN ROB.SS	
13	498-020	PLUG, RUBBER #10 C/W TETHER	
14	590-420	PVC HOSE BARB, 2"HB X 2"MPT	
15	590-025	SCD80 PVC ELBOW 90,2"FPTxFPT	
16	475-090	GASKET, INTAKE REC TANK 2"	
17	445-040	CATCH, RUBBER - COMPACT REC TANK	
18	475-101	GASKET, CHANNEL (LINT BASKET) CP45,47,56	
19	400-125	LOCKNUT, 8 X 32 NYLON S.S.	
20	475-103	GASKET, CHANNEL (FILTER) 45,47,56	
21	560-205	FILTER, 2 1/2" S/S	
22	560-370	FILTER BASKET, ALUMINUM, CLEANCO	

Recommended Fluids for the TM FLOODMASTER 47 Maintenance



707-005
SKF LGMT3/0.4 Grease



706-035
MD One Tuthill Blower Oil