



**ABSOLUTE PETROLEUM
NORTHERN BRAIDING WORKSHOP**

ABSOLUTE
PETROLEUM

AUDIENCE POLL

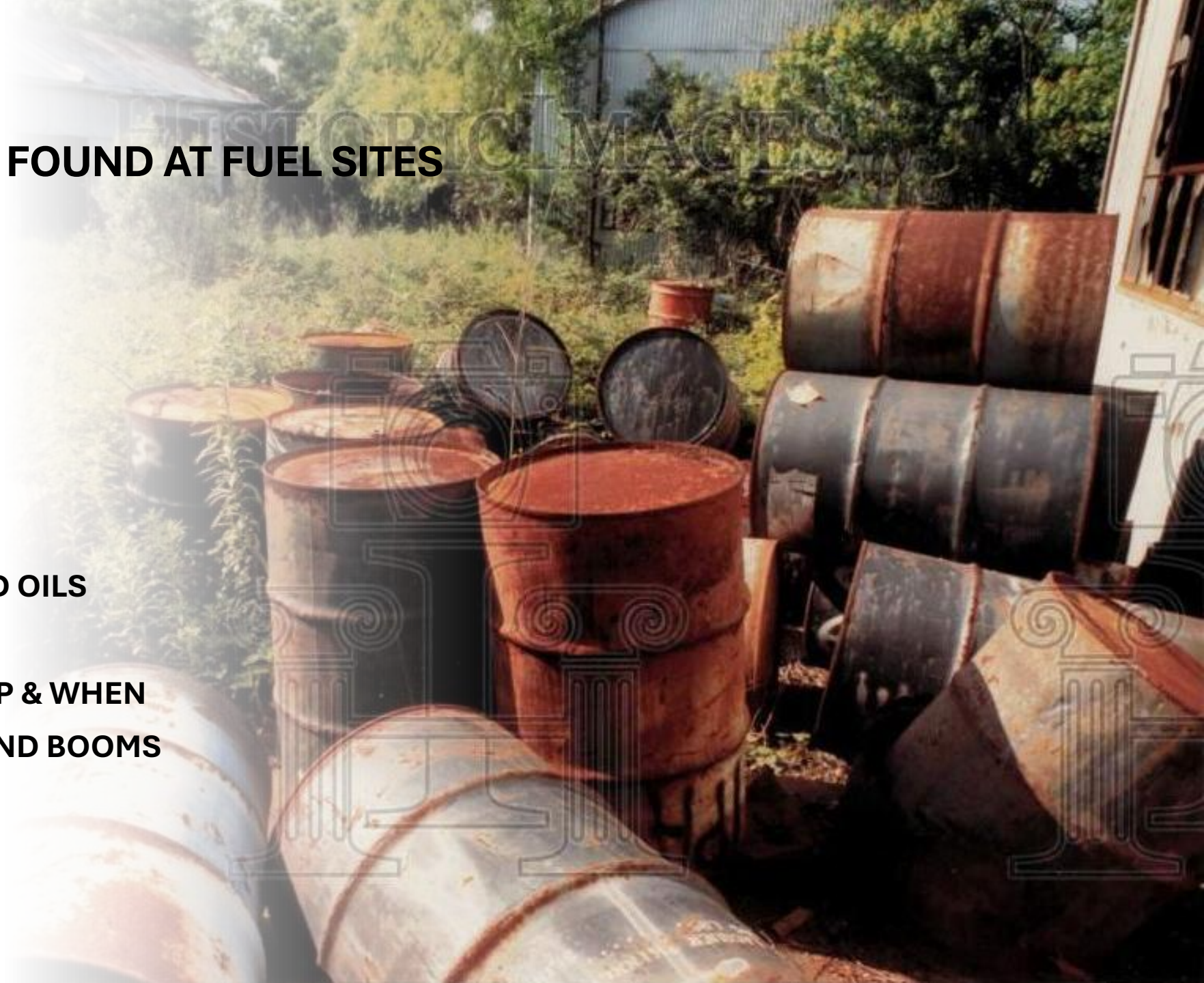
WHAT IS THE BIGGEST ISSUE WITH CONTAMINATED SITES IN YOUR COMMUNITY

- CAN CAUSE ISSUES WITH ISSUES WITH WATER SUPPLY
- IS COSTLY TO REMEDIATE
- CAN CAUSE HEALTH ISSUES
- REDUCES THE USAGE OF THE LAND WHICH IS CONTAMNATED
- CAN POTENTIALLY BE IGNITED - PROVIDED VAPOURS ARE HIGH



ISSUES COMMONLY FOUND AT FUEL SITES

- **LEAKS**
 - **SMALL TO LARGE**
 - **WHAT TO DO**
 - **WHO TO CALL & WHEN**
- **DRUMS OF OLD FUEL AND OILS**
 - **WHAT TO DO WITH**
 - **WHO TO CALL FOR PICK UP & WHEN**
- **OLD ABSORBANT PADS AND BOOMS**
 - **WHAT TO DO WITH**
 - **WHO TO CALL & WHEN**



SPILL KITS - HOW TO USE PROPERLY

SPILL KIT IS AN ALL-IN-ONE CONTAINER FOR STORING SAFETY GEAR AND MATERIAL TO CLEAN UP SPILLS

- THEY ARE DESIGNED TO MITIGATE RISKS AND PREVENT HARM TO PEOPLE AND THE ENVIRONMENT
- SPILL KITS COME IN VARIOUS SIZES AND ARE TAILORED TO VARIOUS SPILL SCENARIOS
- COMPACT SPILL KITS – FOR SMALLER SPILLS
- LARGE SPILL KITS – FOR BIGGER SPILLS

GENERAL PROCEDURES FOR USING A SPILL KIT:

- ASSESS THE SITUATION. IDENTIFY THE SUBSTANCE AND SOURCE OF THE SPILL. MOST CASES ARE DIESEL OR GASOLINE
- ENSURE APPROPRIATE PPE IS WORN. GOGGLES, GLOVES, ETC...
- USE BOOMS/SOCKS TO CONTAIN THE AREA OF THE SPILL AND STOP THE SPREAD
- APPLY ABSORBENT PADS/PILLOWS TO ABSORB THE SPILL, GRANULAR ABSORBENT FOR UNEVEN SURFACES
- CLEAN UP THE AREA BY CAREFULLY REMOVING SATURATED ABSORBENT MATERIALS
- BE SURE TO USE THE APPROPRIATE DISPOSAL BAGS PROVIDED FOR USED/SATURATED ABSORBENTS
- REAPPLY FRESH ABSORBENTS TO THE AREA AND CONTINUE PROCESS UNTIL THE SPILL IS COMPLETELY CONTAINED AND ABSORBED
- PLACE ANY CONTAMINATED MATERIAL SUCH AS GRANULAR ABSORBENT, DIRT, GRAVEL, SNOW, ETC... IN THE 55 GALLON DRUM

****RE-STOCK SPILL KIT ITEMS OR REPLACE WITH NEW SPILL KIT AFTER USE DEPENDING ON SEVERITY AND SIZE OF THE SPILL****



COMMON ITEMS FOUND IN A SPILL KIT

- ABSORBENT PADS FOR DIRECT PLACEMENT ON SPILLS
- ABSORBENT SOCKS/BOOMS TO PREVENT THE SPREAD OF SPILLS
- ABSORBENT PILLOWS TO ABSORB LARGER VOLUMES
- GRANULAR ABSORBENT FOR UNEVEN SURFACES
- GOGGLES/GLOVES TO PROTECT EYES AND HANDS FROM HAZARDOUS SUBSTANCES
- DISPOSAL BAGS FOR SAFE DISPOSAL OF USED ABSORBENT MATERIALS
- SOME KITS CONTAIN DRAIN COVERS OR FLOOR PLUGS



ISSUES WITH FUEL - DO TO GASOLINE NOW HAVING ALCOHOL IN IT - ANY AMOUNT OF WATER IN THE FUEL CAN CAUSE ISSUES

- WHEN WATER GETS MIXED INTO FUEL WITH ALCOHOL MIX INTO IT - IT CAUSE PHASE SEPARATION
- PHASE SEPERATION OCCURS WHEN THE ALCOHOL AND WATER MIX - THIS BECOMES HEAVIER THAN THE GASOLINE MOLECULE.
- WITH MINOR AMOUNTS OF WATER /ALCOHOL MIX WITHING THE FUEL - THE FUEL IS STILL USEABLE BUT IT WILL NOT BURN AS EFFICIENTLY - POSSIBLY CAUSING FUEL ENJECTOR ISSUES
- WITH MAJOR AMOUNTS OF WATER / ALCOHOL MIX WITHIN THE FUEL - THE MIXTURE WILL FALL OUT OF THE FUEL AND SIT ON THE BOTTOM ON THE TANK. THIS REMAINING FUEL WITH HAVE LOST A LOT OF ITS OCTANE - **THIS WILL CAUSE THE FUEL TO BE NOT USEABLE** AS IT WILL NOT IGNITE AS REQUIRED TO OPERATE A VEHICLE/
- IN THIS CASE THE MIXTURE NEEDS TO BE REMOVED FROM THE TANK AND STORE FOR REMOVAL OFF SITE
- ONCE REMOVED OCTANE BOOSTER OR PREMIUM FUEL CAN BE ADDED TO THE OCTANE DEPLETED FUEL TO MAKE IT USEABLE AGAIN.



FUEL DISPENSERS



WHAT IS A FUEL DISPENSER

- A FUEL DISPENSER IS MADE UP OF
- WET PARTS
- HIGH VOLTAGE PARTS
- LOW VOLTAGE PARTS
- COMPUTER TYPE CONTROL PARTS



HOSE/NOZZLE/SWIVEL/BREAKAWAY

- HOW TO REPLACE VARIOUS PARTS
- TOOLS AND PARTS REQUIRED
- SAFETY
- HOW TO DISPOSE OF USED PARTS



SHEAR VALVES

SHEAR VALVES ARE INSTALLED UNDER DISPENSERS TO STOP THE FLOW OF FUEL IF THE DISPENSER IS DAMAGED

SOMETIMES SHEAR VALVES WHEN BUMPED HARD WILL DISLODGE THE SAFETY LATCH

HOW TO RESET THE SHEAR VALVE - DO'S AND DON'T'S

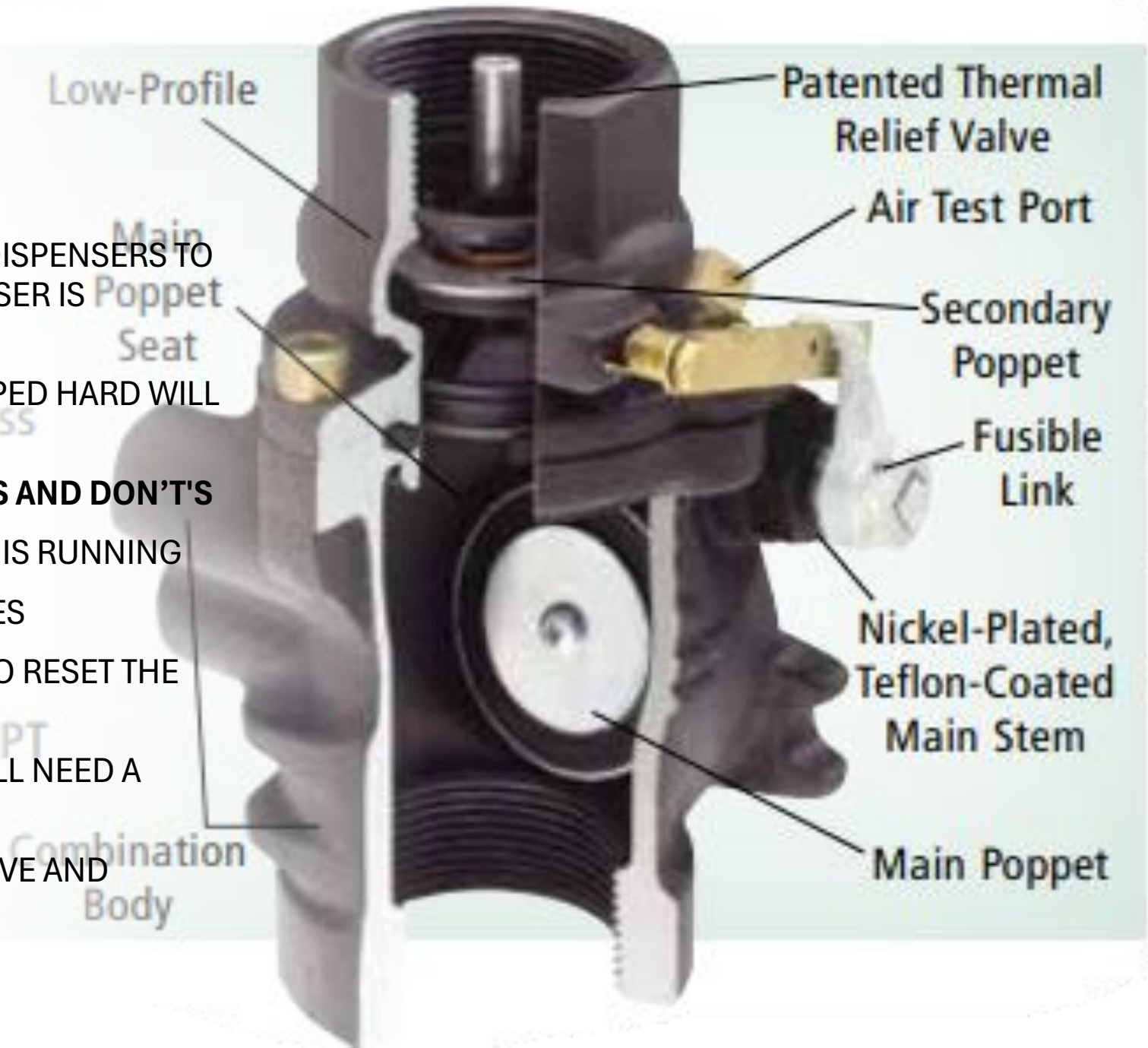
DO NOT TRY TO RESET WHILE THE PUMP IS RUNNING

TURN THE PUMP OFF - WHAT 3-5 MINUTES

DO USE A SMALL CRESCENT WRENCH TO RESET THE SHEAR ARM AND LATCH

IF YOU BREAK THE SHEAR ARM - YOU WILL NEED A REPLACEMENT

YOU WILL NEED AN ALLEN KEY TO REMOVE AND REPLACE THE SHEAR ARM



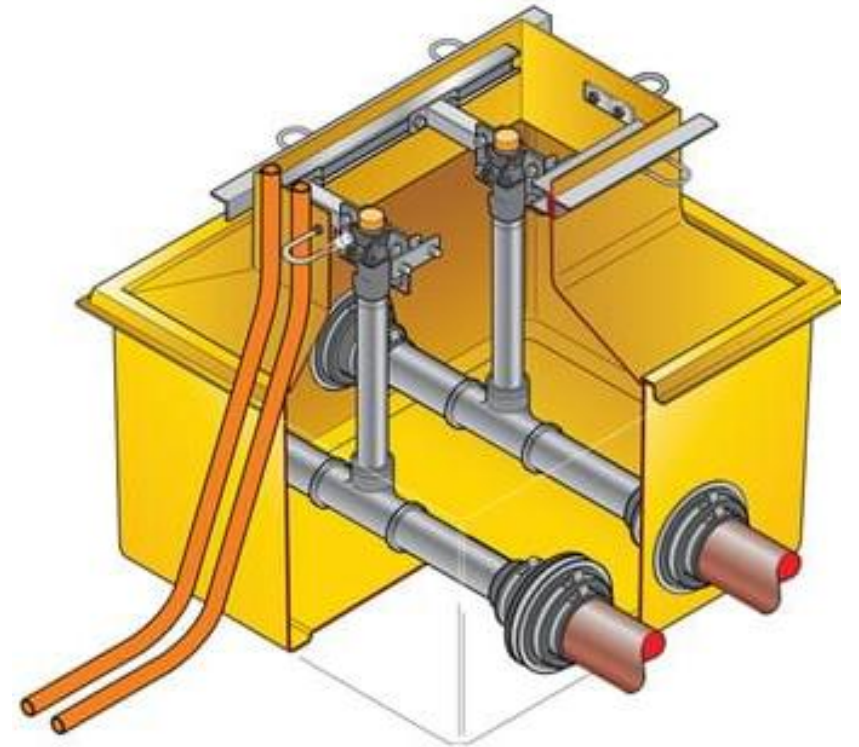
FILTERS - WHEN TO CHANGE / HOW TO CHANGE

- FILTERS SHOULD BE CHANGED EVERY 6 MONTHS - OR WHEN THE FLOW AT THE NOZZLE IS REDUCED
- DIESEL FILTERS IN WINTER MAY NEED TO BE CHANGED FREQUENTLY DURING VERY COLD PERIODS
- DIESEL FUEL IN VERY COLD CONDITIONS CAN SEPARATE CAUSING THE PARAFIN (WAX)
- TO CLOG UP THE FILTERS - THIS TYPICALLY HAPPENS WITH SUMMER DIESEL
- REMEMBER WHEN ORDERING FUEL DURING THE COLD MONTHS - **TO ORDER WINTER DIESEL**



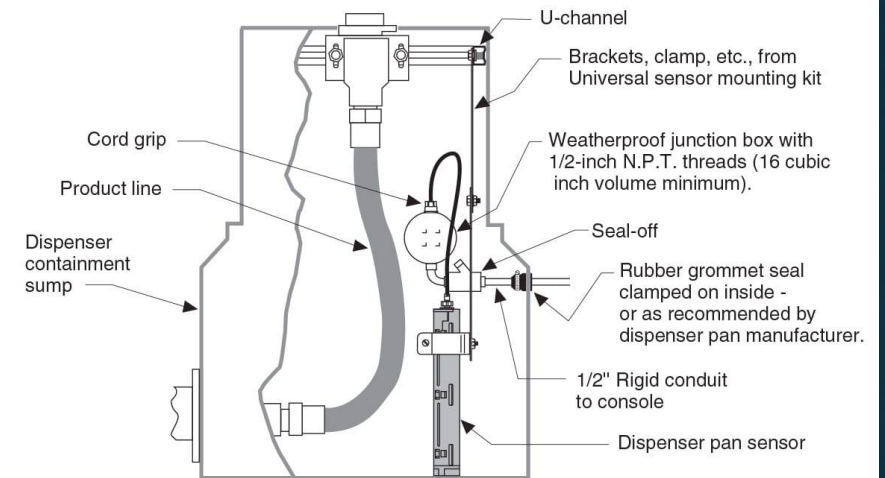
DISPENSER SUMPS

- THERE SHOULD BE A DISPENSER SUMP - UNDER EVERY DISPENSER
- THESE COME IN A VARIETY OF COLOURS AND SIZES
- THESE NEED TO BE ULC LISTED FOR SAFE USE UNDER A DISPENSER
- DUE TO THE NATURE OF THE WET PARTS INSIDE THE DISPENSER - THERE IS OCCASIONALLY FUEL THAT WILL ACCUMULATE IN THE DISPENSER PAN - THIS NEEDS TO BE CLEANED USING THE ABSORBANT PADS FOUND
- INSIDE THE SPILL KIT - ABSORBANTS ONCE USED NEED TO BE DISPOSED OF PROPERLY



DISPENSER SUMP SENSORS

- MOST DISPENSER SUMPS WILL HAVE A SENSOR IN THEM - THIS SENSOR WILL BE TIED TO AN ALARM PANEL
- THE SENSOR NEEDS TO BE INSTALLED CORRECTLY FOR IT TO WORK - OTHERWISE IT WILL ALWAYS BE IN ALARM
- DISPENSER SUMP SENSORS WHEN IN ALARM SHOULD PREVENT THE DISPENSER FROM FILLING OPERATING ONCE THE SUMP IS CLEANED / THE SOURCE OF THE ISSUE IS FOUND AND CORRECTED - THE DISPENSER SHOULD GO BACK INTO SERVICE MODE - NOT ALL SITES ARE LIKE THIS.



Dispenser pan sensor should:

1. Rest in the cup or the lowest point of the dispenser containment sump.
2. Be positioned so as to be removable by pulling the sensor straight up out of the pan.
3. Be mounted in a true vertical position.

MAJOR COMPONENTS IN A BULK PLANT

- BALL VALVES
- MOTORIZED VALVES
- CHECK VALVES
- SOLENOID VALVES
- VENT CAPS
- TURBINES
- PRESSURE RELIEF VALVES
- TANK LEVEL MONITOR PROBES



BALL VALVES & SOLENOID VALVES

BALL VALVES

- USED TO SHUT OR ALLOW THE FLOW OF FUEL ALONG THE PIPELINE
- LEAKS AT THE SEAL / SEAT - BELOW THE HANDLE
- DEPENDING ON THE SEVERITY OF THE LEAK YOU CAN DO THE FOLLOWING
- REMOVE THE HANDLE TIGHTEN DOWN THE PACKING STEM UNDER THE HANDLE
- IF THIS DOES NOT STOP THE LEAK - A NEW VALVE WILL NEED TO BE INSTALLED

SOLENOID VALVES

- SOLENOID VALVES ARE NORMALLY OPEN OR CLOSED
- WHEN THEY RECEIVE A SIGNAL FROM THE DISPENSER - THERE IS DIAPHRAM INSIDE WHICH IS PULLED UP OR PUSHED DOWN BY A STEEL ROD AND MAGNET
- SOLENOID VALVES ARE SERVICEABLE - BUT SHOULD ONLY BE SERVICED BY A TRAINED TECHNICIAN



MOTORIZED BALL VALVE & CHECK VALVE

MOTORIZED BALL VALVE

- SIMILAR TO A BALL VALVE - BUT USES A MOTOR TO OPEN AND CLOSE IT
- IF THE MOTOR FAILS TO OPEN THE BALL VALVE DE-ENERGIZE THE MOTOR AT THE BREAKER PANEL PUSH DOWN THE HANDLE AND TURN TO OPEN OR CLOSE
- IF THIS FAILS - KEEP THE MOTOR DEENERGIZED - REMOVE THE FOUR BOLTS HOLDING THE MOTORIZED HEAD TO THE VALVE PLACE THE HEAD ON THE TANK OR CATWALK
- TURN THE VALVE TO OPEN OR CLOSE USING A WRENCH OR CRESENT WRENCH
- CALL YOUR SERVICE PROVIDER TO SUPPLY AND INSTALL A NEW MOTORIZED VALVE

CHECK VALVES

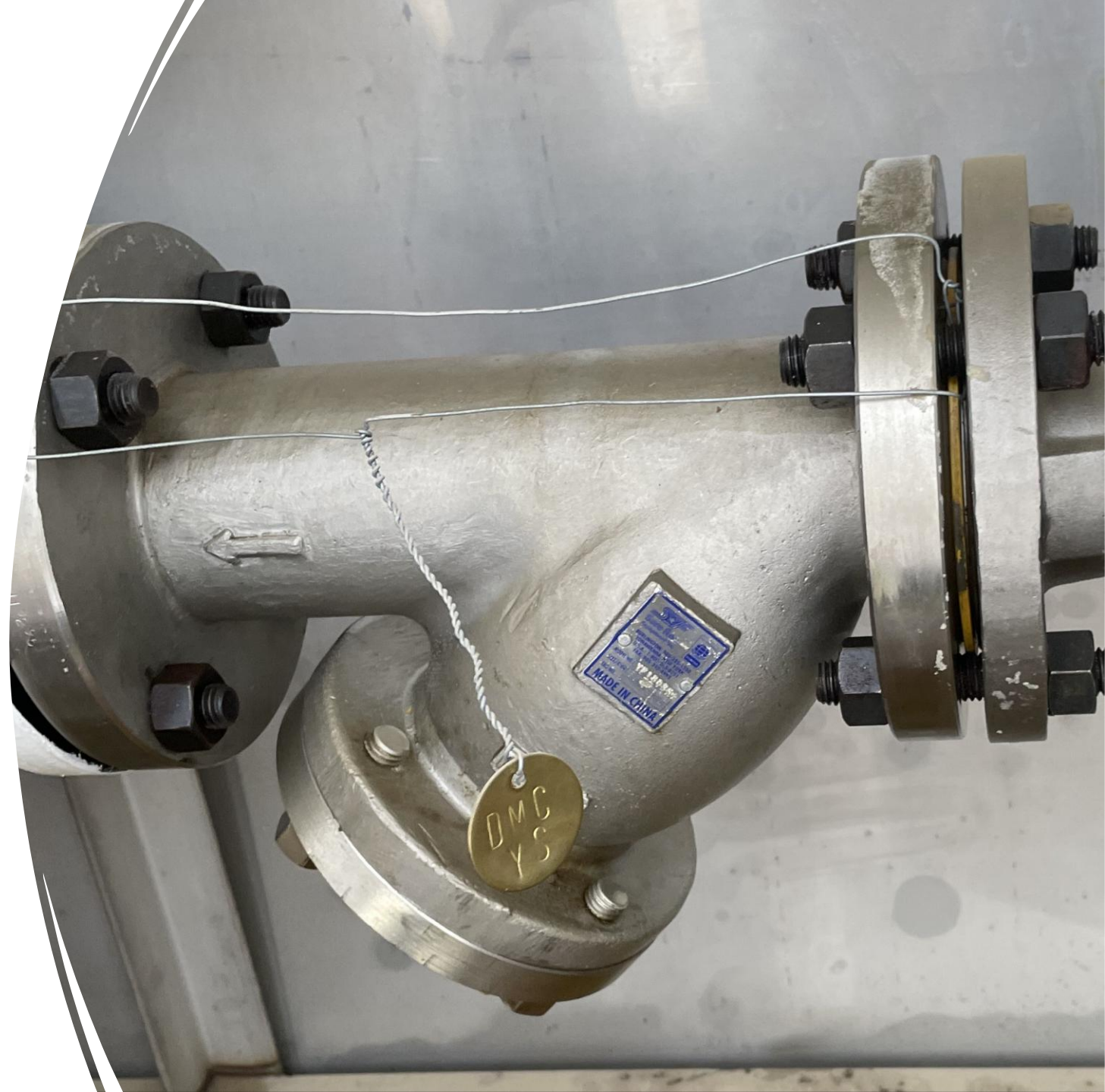
- THESE ARE NON-SERVICEABLE ITEMS

THEY ARE USED TO PREVENT THE FLOW OF FUEL IN ONE DIRECTION WHILE ALLOWING IT IN THE OPPOSITE DIRECTION



STRAINER

- THIS HAS A SCREEN IN THE LOWER FLANGED AREA
- THIS SHOULD BE CLEANED IF FLOW SLOWS AND FILTERS ON DISPENSERS ARE ALREADY REPLACED
- THIS NEED TO BE CAREFULLY DRAINED AS MAY BE UNDER PRESSURE AND HAVE A LARGE VOLUME OF FUEL IN IT.



VENT CAPS

- WITH THE ALCOHOL IN TODAY'S GASOLINE - IT IS VERY IMPORTANT TO MAKE SURE YOUR FUEL TANKS HAVE A VENT CAP INSTALLED ON THEM
- VENT CAPS ARE USED TO PREVENT WATER AND DIRT FROM ENTERING THE TANK / FUEL

THERE ARE 2 TYPES OF VENT CAPS

OPEN VENT CAPS - THESE ARE OPEN TO THE ATMOSPHERE -AND HAVE A SCREEN TO PREVENT DUST AND DIRT FROM ENTERING THE TANK

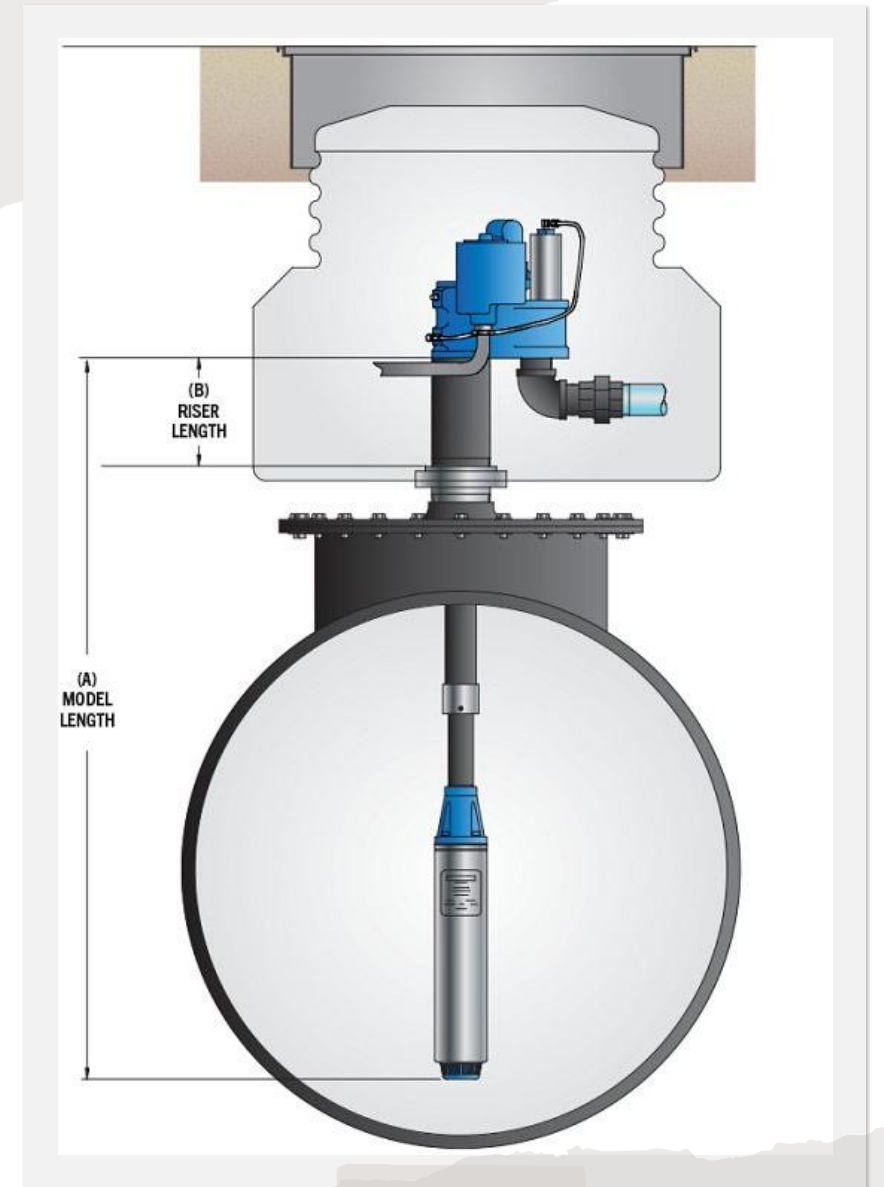
- TYPICALLY, THESE ARE USED FOR DIESEL TANKS - AS DIESEL DOES NOT EVAPORATE AS QUICKLY AS GASOLINE

PRESSURE VENT CAPS - THESE ARE CLOSED TO ATMOSPHERE, AND ONLY OPEN WHEN THE PRESSURE WITHIN THE TANK BUILDS. THIS PREVENTS THE EVAPORATION OF THE FUEL IN THE TANK THESE ARE TYPICALLY USED FOR GASOLINE OR AVIATION FUELS



TURBINES - STP

- THESE ARE THE ACTUAL PUMPS THAT PUSH FUEL TO THE DISPENSERS
- COMMON ISSUES FOUND WITH TURBINES
- PUMP MOTOR SEIZED - NEEDS REPLACEMENT BY TRAINED TECHNICIAN
- ELECTRICAL CAPACITOR FAILS - NEEDS REPLACEMENT BY TRAINED TECHNICIAN
- MOTOR STARTED FAILED - NEEDS REPLACEMENT BY TRAINED TECHNICIAN



PRESSURE RELIEF VALVE

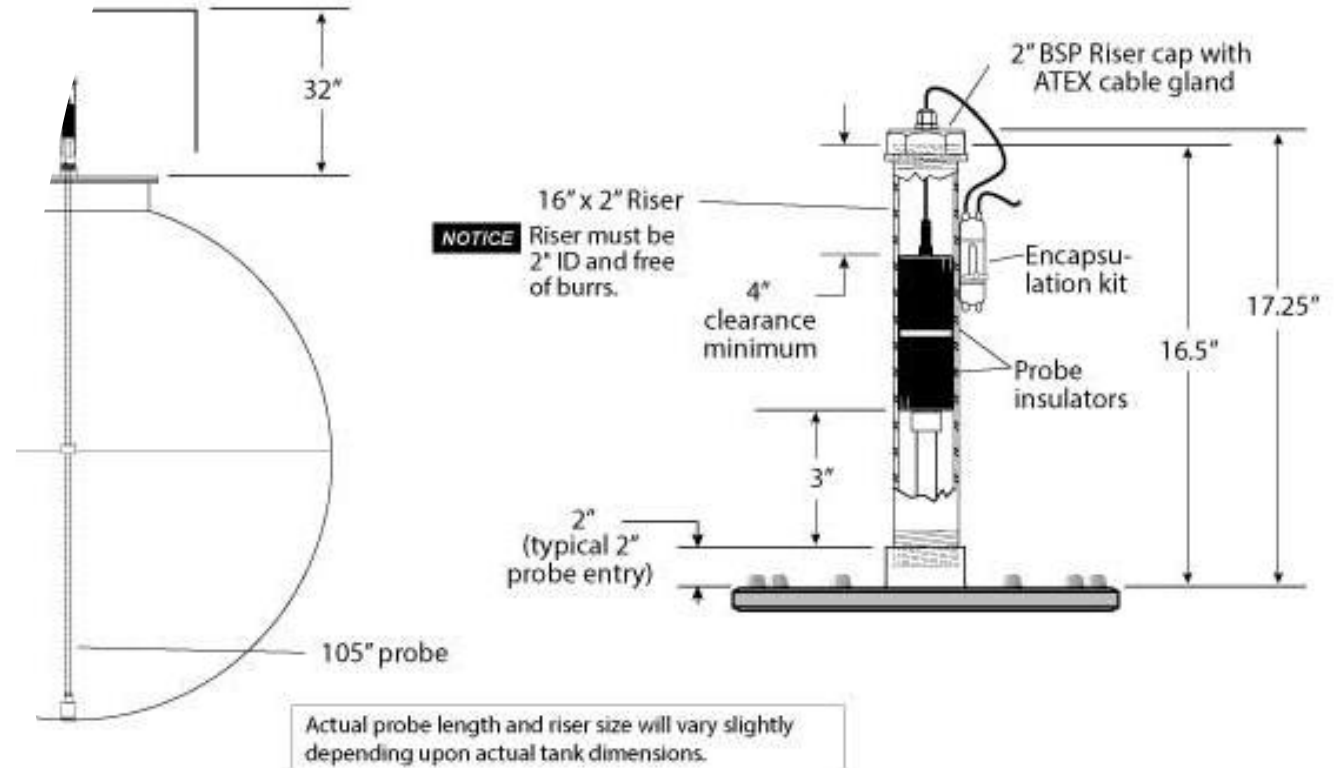
- THESE ARE USED IN THE PIPELINES TO REMOVE EXCESS PRESSURE BACK TO THE MAIN TANK
- THESE **ARE NOT** A ON SITE SERVICEABLE ITEM



TANK LEVEL PROBES

- IF YOU HAVE THESE ON YOUR TANKS - THESE ARE USED TO RECORD FUEL AND WATER LEVELS IN THE TANK
- DEPENDING ON YOUR SYSTEM - THESE SHOULD BE USED TO CONFIRM FUEL DELIVERY AMOUNTS
- THESE SHOULD BE SERVICED - BY A TRAINED TECHNICIAN ONLY

Veeder-Root Mag Plus Probe in Typical 98" Diameter Tank



In case of an

Environmental Emergency

Call 1-855-944-4888

“Environmental Emergency” means an environmental accident which creates an immediate or imminent hazard which requires the taking of prompt emergency measures to protect persons, property and the environment.

Call 1-855-944-4888

When reporting an environmental emergency, please provide as much information as possible, including:

- **Your name and phone number**
- **Exact location of the emergency**
- **Type of emergency (spill, leak, fire, overturn, derailment, etc.)**
- **Name and spelling of the product(s) involved, if known**
- **Estimate of the amount of the product(s) (release or still in containment)**

A member of our Environmental Emergency Response Team will contact you immediately with information about emergency procedures and the potential dangers associated with the product(s) involved. On-site assistance will be provided as necessary.