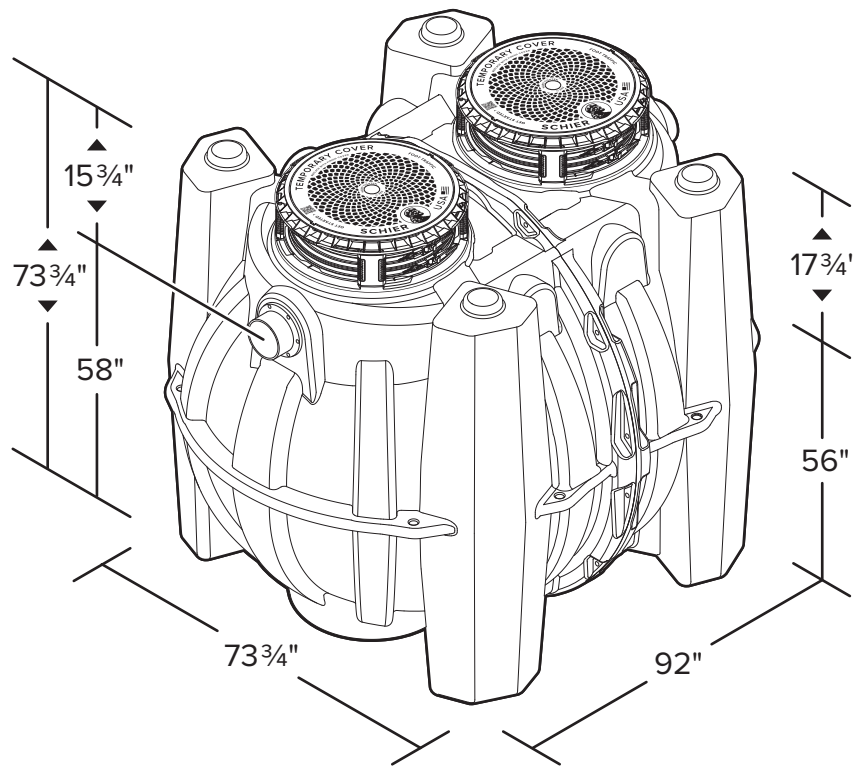


INSTALLATION GUIDE



Failure to follow this guidance
will void your warranty

GB-1000 100/200 GPM Great Basin® indoor/outdoor grease interceptor



Cover adapter may be raised or lowered 2 1/2".

Examine product for damage and read all instructions prior to installation.

Please report significant damage to customer service at (913)-951-3300.

Warranty is void if a damaged product is installed, or if the product is not installed in conformance with all local codes.

Schier recommends installation only by a licensed plumber.



SCHIER®

SPECIAL PRECAUTIONS

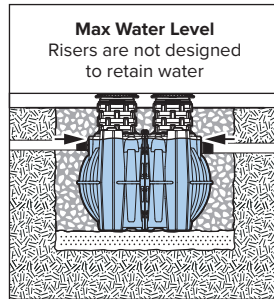


Failure to follow this guidance will void your warranty

PRESSURE TESTING

Do not pressure test the interceptor or riser system. Doing so may result in property damage, personal injury or death. The interceptor is intended for open system (vented) gravity drainage use only and should not be used in closed system pressure applications.

Before installation, the interceptor should be tested up to top of tank for water tightness. See page 5 for details. The risers are not designed to retain water and should not be water tested.

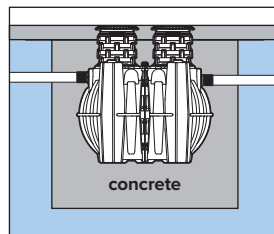
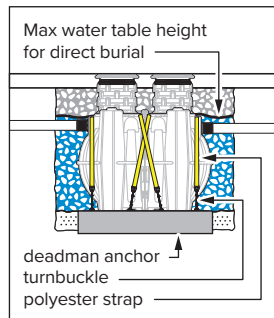


HIGH GROUNDWATER LEVELS

Anchor Kit Required: If the interceptor is at risk of being exposed to groundwater, an anti-flotation anchor kit is required. Great Basin model GB-1000 uses model AK3 anchor kit for use with deadmen anchors.

High groundwater level warning: Interceptors and risers are not intended to withstand groundwater levels higher than the top of the tank body. Exposure to such elevated groundwater levels may compromise the structural integrity of the interceptor. If the interceptor is at risk of being exposed to groundwater levels higher than the top of the tank body, it must either be encased in concrete or installed inside a watertight concrete vault.

Please contact Schier for concrete encasement guidance.

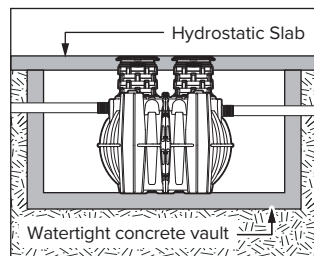


Determining groundwater levels:

High risk areas include coastal regions, floodplains and other areas susceptible to excessive stormwater accumulation. When available, consult the geotechnical report to determine the elevation of the seasonal high groundwater level.

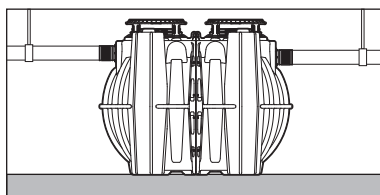
Hydrostatic/pressure slabs:

Hydrostatic slabs are designed to withstand upward groundwater pressure and water infiltration when the slab is located at an elevation lower than the water table or high groundwater level. If the interceptor and risers will be located underneath a hydrostatic slab, they must be installed inside a watertight concrete vault.



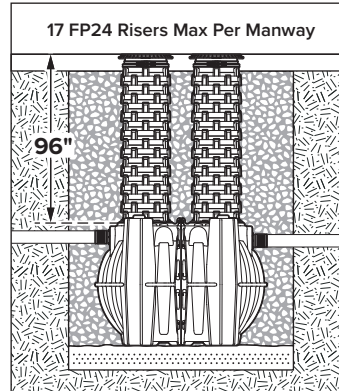
FULLY SUPPORT BASE OF UNIT

The interceptor should be installed on a solid, level surface in contact with the entire bottom of tank footprint.

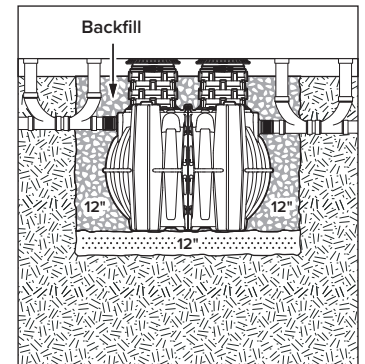


EXCAVATION, BACKFILL AND PAD

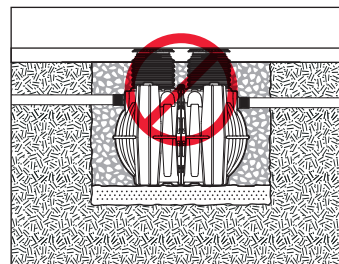
Maximum burial depth: The interceptor should not be buried deeper than 96" from the shoulder of the unit to grade. For deeper burials contact customer support.



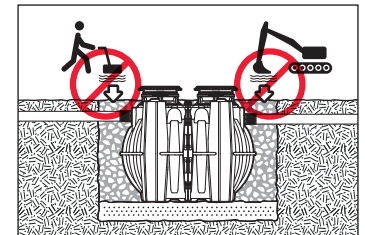
Approved backfill: Backfill must be clean, crushed stone approximately 1" in size (AASHTO M43 Size #57 or similar) free of debris and fines. **Native soil and sand are not approved backfill materials.**



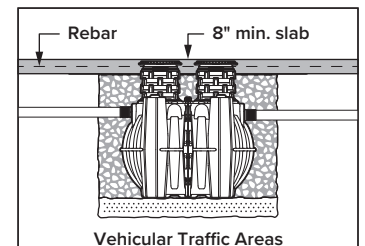
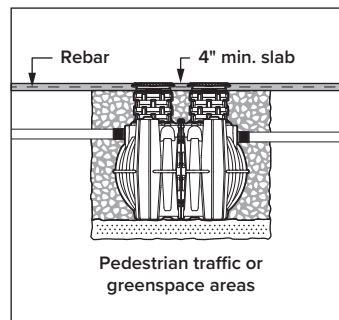
Corrugated pipe is not allowed for riser use.



Do not compact backfill mechanically: Compact by hand only

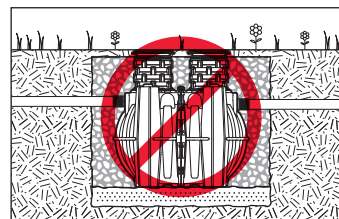


Concrete pad required at grade: For all buried applications. See page 11 for details.

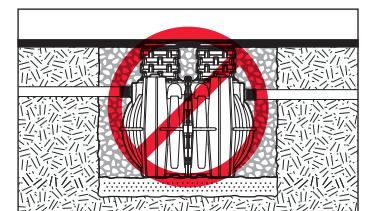


NOTE: An alternate 6" pad may be allowed if the site/civil engineer has provided written calculations and stamped approval that has been submitted and approved by Schier Products.

Do not install using native soil at grade.



Do not install using asphalt pad.



SPECIAL PRECAUTIONS

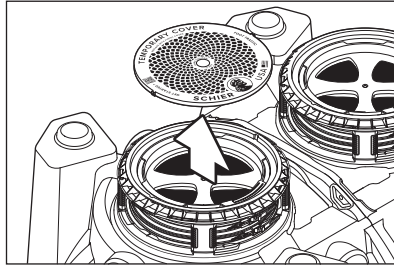


Failure to follow this guidance will void your warranty

COVER SELECTION

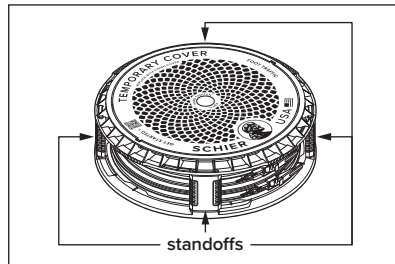
Discard temporary covers:

Temporary covers shipped with this unit are not intended for post construction use and must be replaced with permanent pedestrian or traffic covers by Schier before the interceptor is put into service.



Secure cover adapters:

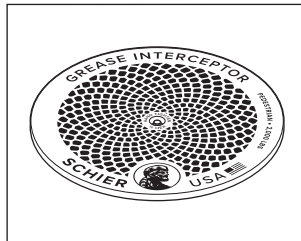
Cover adapters must be secured to base units in all above grade installations (ex: in a basement). Use the (4) standoffs included with each manway secured into the locked position.



Pedestrian cover - polypropylene:

P24-GI bolted injection molded covers should be used for above grade and pedestrian rated applications. Not recommended for outdoor use unless in a non-traffic area.

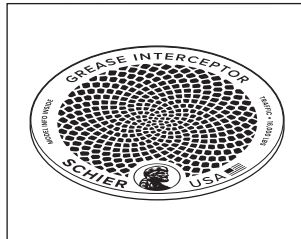
Plastic, bolted 24", rated to 2,000 lbs., generally for indoor or above grade use.



Traffic cover - cast iron:

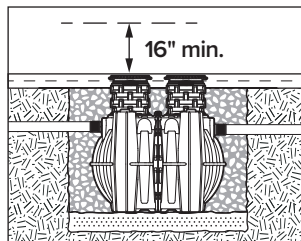
T24-GI pickable cast iron covers should be used for outdoor buried and vehicle rated applications. Not recommended for above grade or most indoor use.

Cast iron, 24", H-20 rated to 16,000 lbs., generally for outdoor use.



Required clearance above covers:

Allow at least 16" of clearance above the interceptor for routine maintenance.



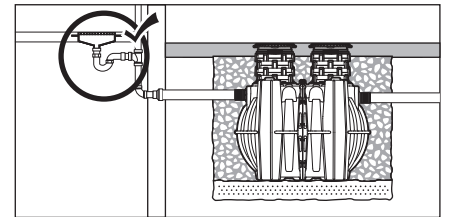
INDOOR INSTALLATION TIPS

Dishwasher discharge: If your dishwashing sink(s) discharges into a floor drain/sink (drain), you may regulate the flow into the drain to avoid an overflow of water onto the kitchen floor. This can be done by installing a valve or flow restriction cap on the sink piping that discharges into the drain.

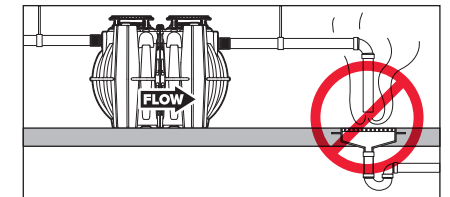
High temperature kitchen water: Wastewater entering the interceptor should not exceed 150° F. If wastewater temperatures will exceed 150° F, a drain water tempering valve (DTV) should be installed to cool the water.

Odor alert!

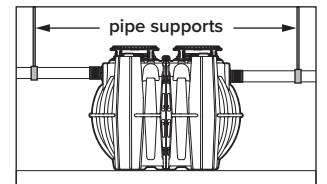
The interceptor is not a sewer gas trap. All upstream fixtures must be trapped.



Do not install an air gap on the outlet side of the interceptor.



Support piping: Inlet and outlet piping must be properly supported.



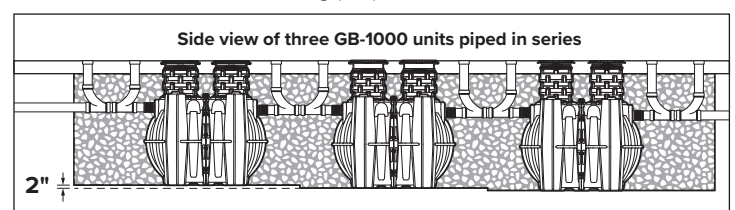
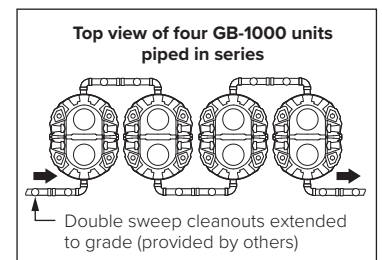
SERIES INSTALLATIONS

For lower flow rates and higher grease storage requirements. Piping between units and double sweep cleanouts by others.

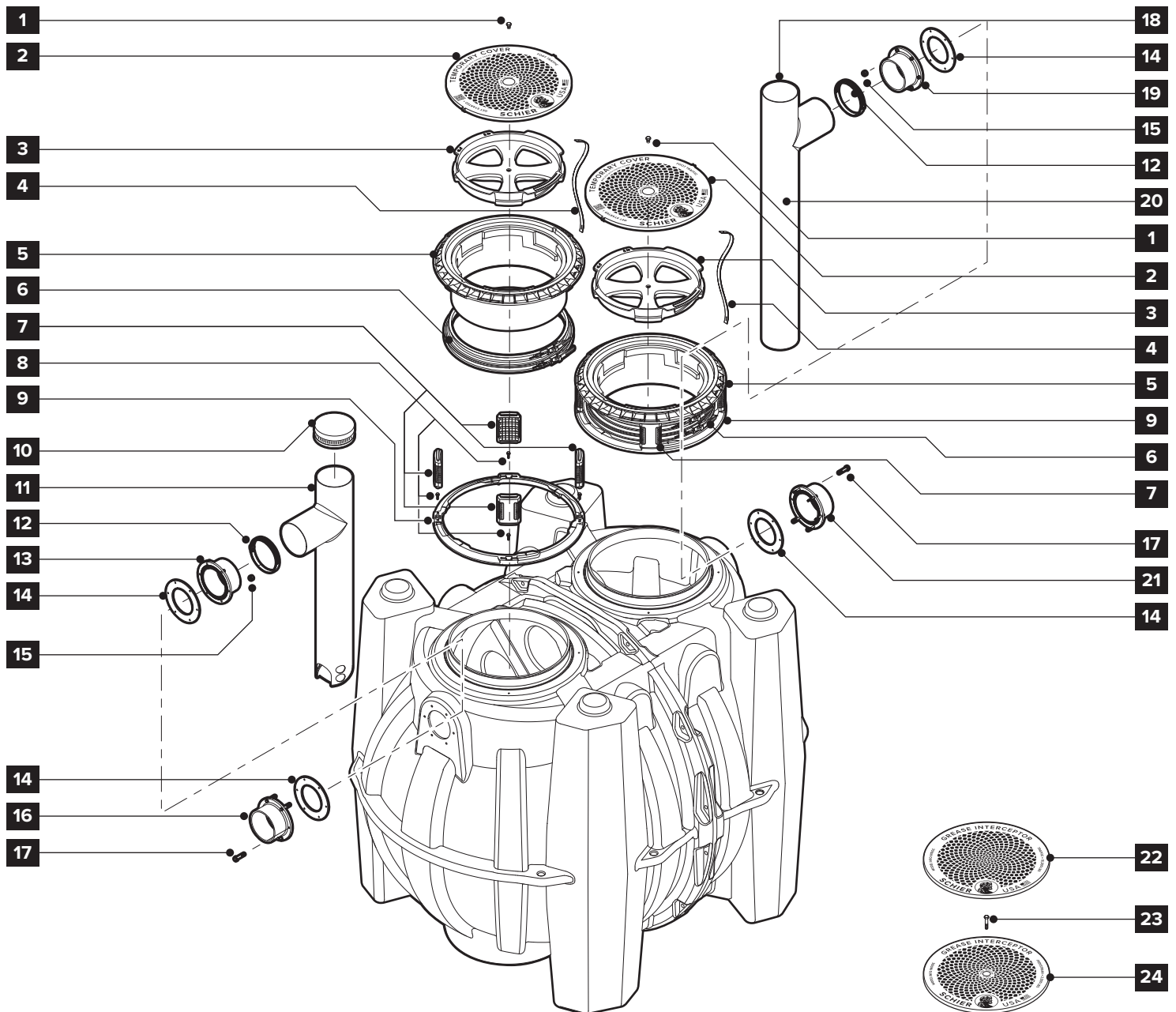
Below grade installations:

All units must sit level in the excavation pit. Note that downstream units must be buried 2" deeper than the adjacent, upstream fixture.

Double sweep cleanouts extended to finished grade should be installed before the first unit inlet, after the last unit outlet and in between units for line cleaning purposes.

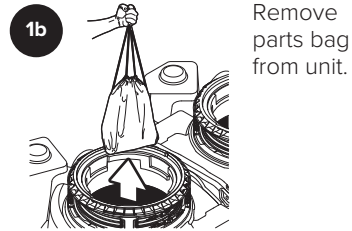
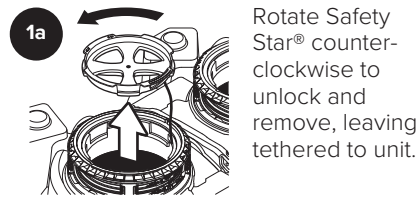


GETTING TO KNOW THE GB-1000 (6" connections shown)

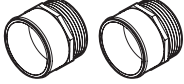
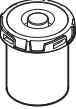




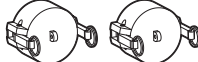


- | | | |
|---|---|--|
| 1. Temporary cover bolts (x2) | 10. Inlet diffuser cap (flexible PVC) | 18. Outlet air relief/visual access |
| 2. Temporary covers (x2) | 11. Inlet diffuser | 19. Interior outlet bulkhead connection 6" plain end |
| 3. Safety Star® access restrictors (x2) | 12. 5" Stainless steel band clamps (x2) | 20. Outlet diffuser |
| 4. Safety Star® tethers (x2) | 13. Interior inlet bulkhead connection 6" plain end | 21. Exterior outlet bulkhead connection 6" plain end |
| 5. Cover adapters (x2) | 14. Bulkhead connection gasket (x4) | 22. Traffic cover (not included) |
| 6. Neck gasket assemblies with upper and lower stainless steel band clamps (x2) | 15. Bulkhead connection nuts (x12) | 23. Pedestrian cover bolt (not included) |
| 7. Standoffs (x8) | 16. Exterior inlet bulkhead connection 6" plain end | 24. Pedestrian cover (not included) |
| 8. Tank ring mounting bolts (x8) | 17. Bulkhead connection bolts (x12) | |
| 9. Tank rings (x2) | | |

1 Remove loose parts bag

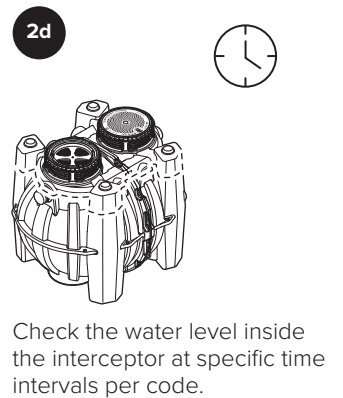
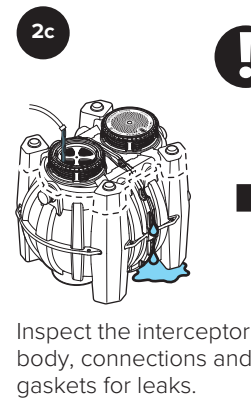
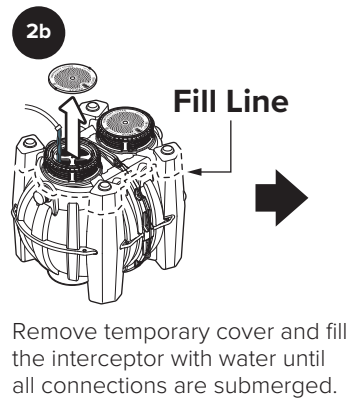
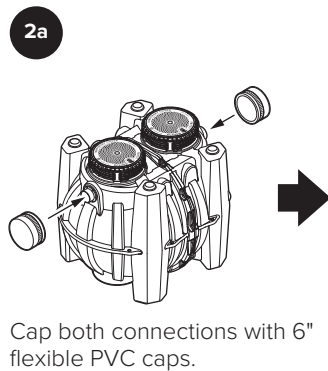


Installation Guide (all models)

Models with 4" connections only		Models with 6" connections only	
 <p>4" plain end fitting (x2)</p>		 <p>Inlet diffuser cap (white)</p>	
 <p>Inlet diffuser cap (black)</p>			
Models with pumpout ports only			
 <p>4" cleanout plug (x2)</p>		 <p>4" MPT x 3" plain end fitting (x2)</p>	
 <p>3" cam and groove fitting (x2)</p>		 <p>3" cam and groove cap (x2)</p>	

Missing Parts? Call customer support at 913-951-3300

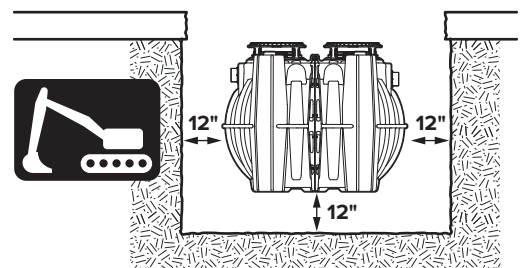
2 Test tank for water tightness



Have a Leak? Call customer support at 913-951-3300

3 Excavate burial pit ONLY

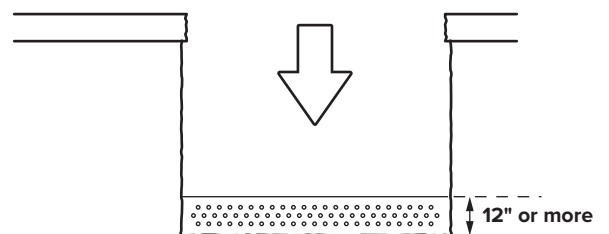
Excavate the interceptor burial pit to at least 12" larger than the interceptor on all sides and 12" deeper than the interceptor bottom.



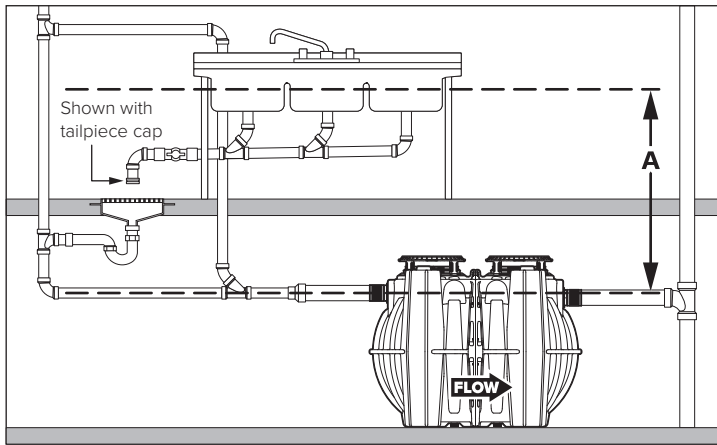
4 Fill base layer ONLY

Lay a level layer of well-packed, crushed aggregate at the base of the pit. Base layer material must be clean, crushed stone approximately 1" in size (AASHTO M43 Size #57 or similar) free of debris and fines.

Native soil and sand are not approved backfill materials.



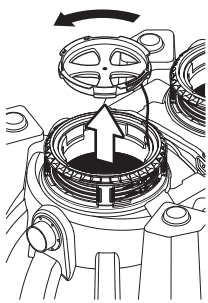
5 Configure inlet diffuser



The GB-1000 is supplied with an inlet diffuser cap (black or white) for increased head pressure conditions.

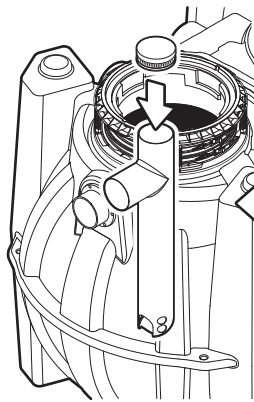
- If dimension "A" is 13 feet or less, no additional components are needed, **go to Step 6.**
- If dimension "A" is more than 13 feet, or a high flow or increased head pressure condition exists, **follow the steps below.**

5a Install the inlet diffuser cap (located in the parts bag)



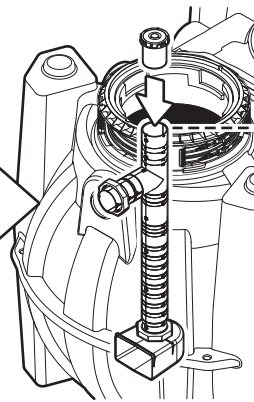
Rotate Safety Star® counter-clockwise to unlock and remove, leaving tethered to unit. Get inlet diffuser cap from parts bag.

6" Connection

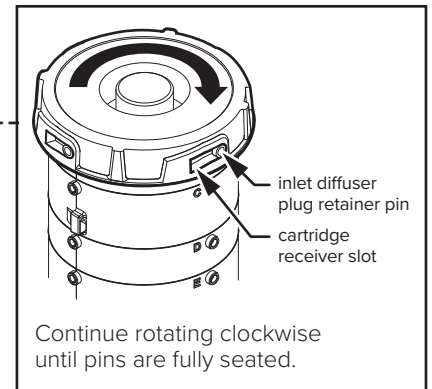


Slide 6" flexible PVC inlet diffuser cap (black) onto top of inlet diffuser and tighten its band clamp.

4" Connection



Slide inlet diffuser cap (white) into top of inlet diffuser and rotate clockwise until cartridge drops onto inlet diffuser cap retainer pins.



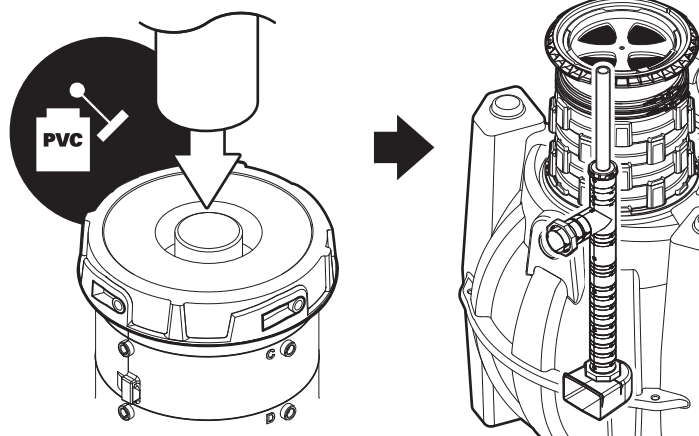
Continue rotating clockwise until pins are fully seated.

5b OPTIONAL for 4" diffusers: install extension handle



ONLY

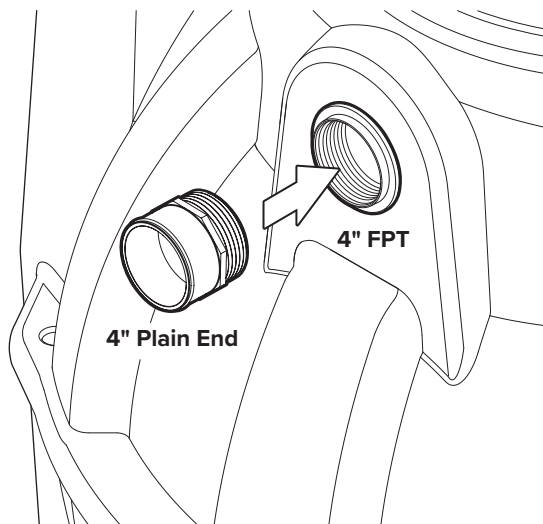
For easy inlet diffuser cap removal in deep burial installations, 1½" PVC SCH. 40 pipe may be used as an extension handle. Before risers have been installed, cut pipe to length and attach to top of cap using PVC primer/cement. Extension handle length should be about 12" shorter than total riser height and top out just below the Safety Star®.



Finished installation showing optional extension handle

6 Connect piping to interceptor

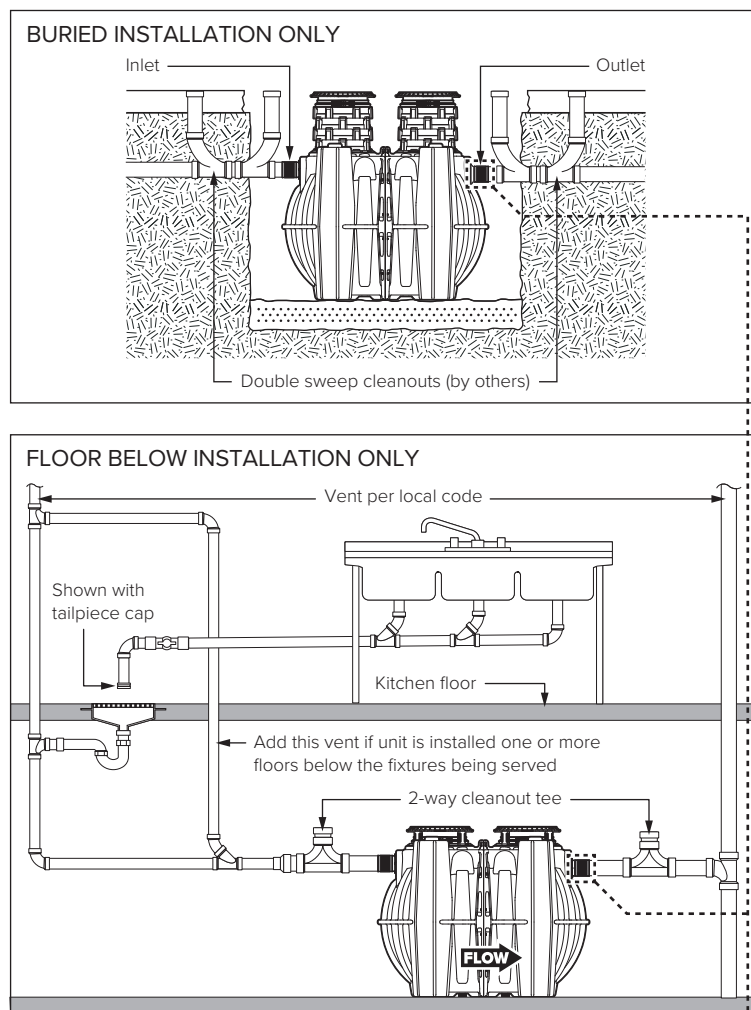
6a Install plain end fittings (4" connections only)



Screw plain end fittings (2 - 4" MPT x 4" plain end fittings provided) into the inlet and outlet bulkhead fittings on the interceptor using pipe thread sealant or tape approved for use with plastics.

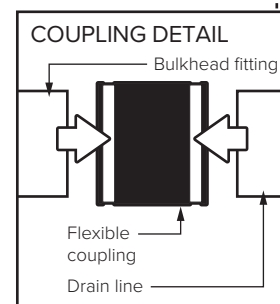
Note: 6" connections must be factory installed.

6b Connect the interceptor to drain lines



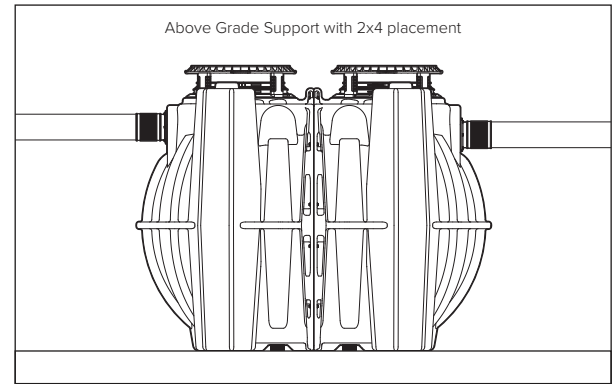
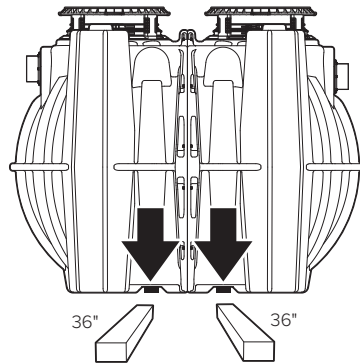
Place the interceptor into its final position and set level. Mechanically couple the inlet and outlet fittings to the drainline using a flexible coupling. **Do not glue or solvent weld.**

Notes: Ensure all upstream fixtures are trapped. Vent the drainline per local code. The installation of 2-way cleanout tees is recommended for above grade installations. The installation of double sweep cleanouts or combination wyes is recommended for buried installations, check local code requirements to confirm acceptability.



7 Above grade installation support

For use in supporting tank body installed above grade. Use the provided 2x4 shipped on top of the tank. Cut two 36" long pieces from the supplied 2x4 and install them into the allotted slots at the bottom of the tank.



8 Wet or air test piping per local code

! WARNING! DO NOT AIR TEST UNIT OR RISER SYSTEM!

Doing so may result in property damage, personal injury or death. The interceptor is intended for open system (vented) gravity drainage use only and should not be used in closed system pressure applications.

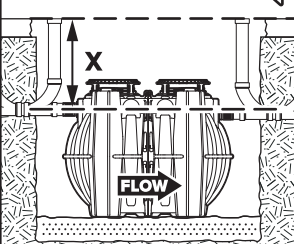
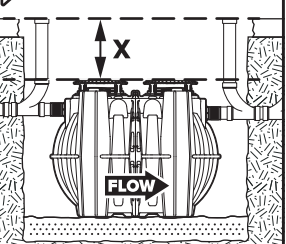
9 Bring covers flush-to-grade ONLY

For GB-1000 buried installations, the cover adapter can be raised or lowered up to 2½" from the factory set position. Deeper burials require Fast Pitch® FP24 risers to extend cover adapter to grade.



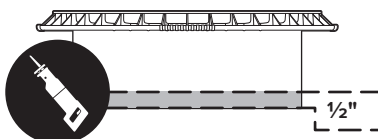
9a Determine number of risers required

Measure the distance X from either the centerline of inlet, or the top of the temporary covers (from factory set position with standoffs in place) to finished grade. Consult the chart below to determine the number of risers required.

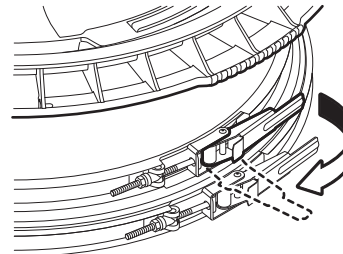
RISER HEIGHT NEEDED MEASURED FROM		FP24 risers required per manway
Centerline of inlet	Top of temporary covers	
		
		
15¾ - 18¼"	0 - 2½"	0
18¼ - 23¼"	2½ - 7½"	1
23¼ - 28¼"	7½ - 12½"	2
28¼ - 33¼"	12½ - 17½"	3
33¼ - 38¼"	17½ - 22½"	4
38¼ - 43¼"	22½ - 27½"	5
43¼ - 48¼"	27½ - 32½"	6
48¼ - 53¼"	32½ - 37½"	7
53¼ - 58¼"	37½ - 42½"	8
58¼ - 63¼"	42½ - 47½"	9
63¼ - 68¼"	47½ - 52½"	10
68¼ - 73¼"	52½ - 57½"	11
73¼ - 78¼"	57½ - 62½"	12
78¼ - 83¼"	62½ - 67½"	13
83¼ - 88¼"	67½ - 72½"	14
88¼ - 93¼"	72½ - 77½"	15
93¼ - 98¼"	77½ - 82½"	16
98¼ - 103¼"	82½ - 87½"	17

Reducing interceptor height for shallow burials

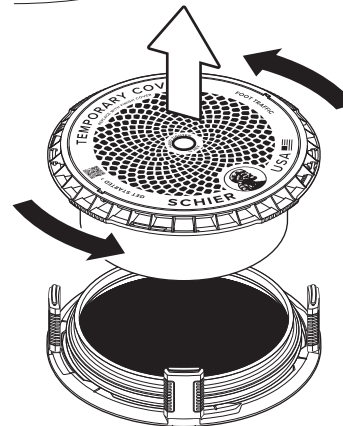
The cover adapter may be lowered up to 2½" from the factory set position. Remove the standoffs, loosen the neck gasket upper band clamp and remove the cover adapter. Use a reciprocating saw to trim up to ½" from the bottom of the cover adapter ensuring it can be re-inserted without internal component interference. CAUTION: this will permanently reduce the cover adapter maximum extension from 5" to 4½". Place the cover adapter back into the neck gasket and go to Step 9d.



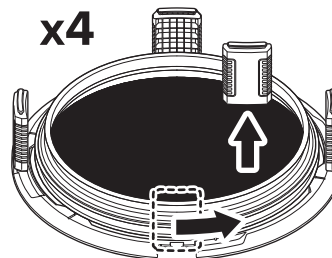
9b Remove cover adapter, standoffs and neck gasket



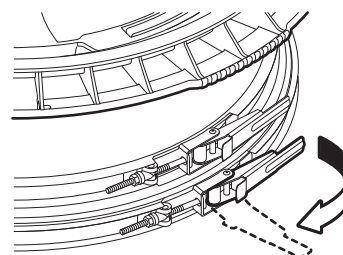
Loosen the upper band clamp by pulling open the quick release locking lever



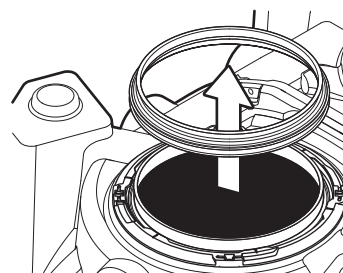
Grab the cover adapter handles and turn it counterclockwise to unlock it from the tank. Remove cover adapter



Remove the four standoffs from the tank ring (slide out of slots)



Loosen the lower band clamp by pulling open the quick release locking lever

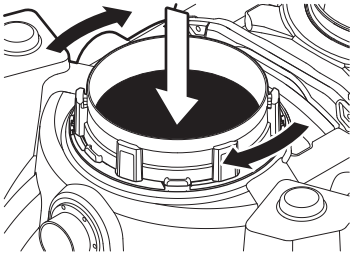


Remove the neck gasket from the tank.

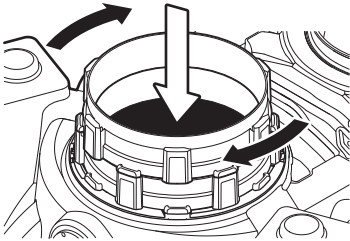
CONTINUED

9 Bring covers flush-to-grade (continued) ONLY

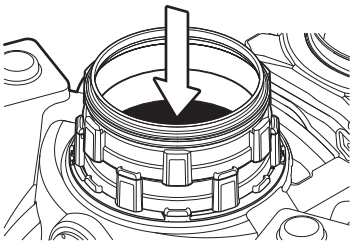
9c Install risers and replace neck gasket



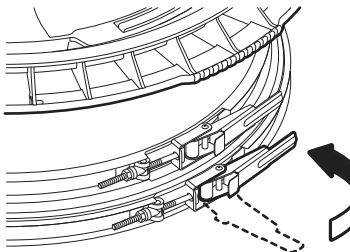
Place the Fast Pitch® riser onto the tank ring and align tabs on riser into the slots on tank ring. Turn clockwise until the riser fits firmly into place.



Place additional risers making sure each riser locks firmly into place until proper height is achieved.

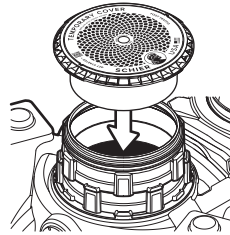


Attach the neck gasket on top of the last riser. Ensure that the gasket fully surrounds the top of the riser.



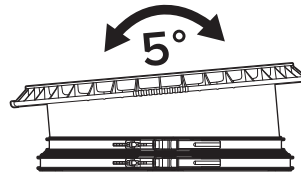
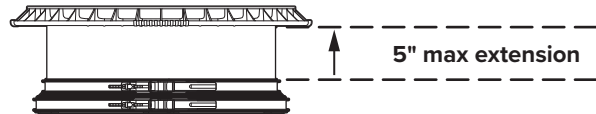
Tighten the lower band clamp by pushing the quick release locking lever closed.

9d Make final cover adapter adjustments

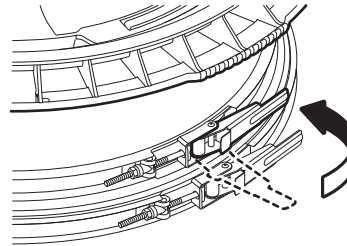


Insert cover adapter into riser assembly.

Adjust cover adapter heights as needed.



Cover adapters may be tilted up to 5° in any direction.

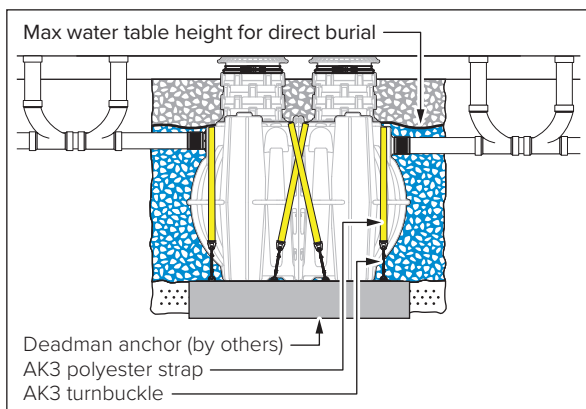


Tighten the upper band clamp by pushing the quick release locking lever closed.

Adjusting neck gasket band clamp tension

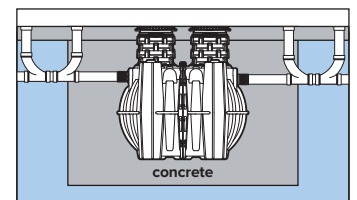
Factory set clamp tension should not need to be modified. If necessary, adjust by first pulling open the quick release locking lever. Then slightly hand tighten (clockwise) or loosen (counter-clockwise) hex nut at end of threaded rod.

10 Install anti-flotation anchor kit for high groundwater level applications only ONLY



If the interceptor is at risk of being exposed to groundwater, an anti-flotation anchor kit is required. Great Basin® model GB-1000 uses model AK3 anchor kit for use with deadmen anchors (by others).

Additional protection required: If the interceptor is at risk of being exposed to groundwater levels higher than the top of the tank body, it must either be encased in concrete or installed inside a watertight concrete vault. Please contact Schier for concrete encasement guidance.

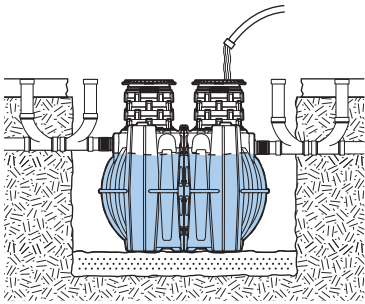


11 Backfill around interceptor ONLY

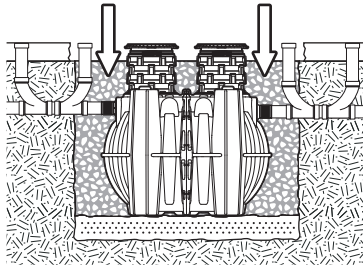


Failure to follow this guidance will void your warranty

11a Fill the interceptor with water

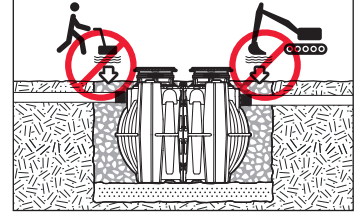


11b Add backfill



Backfill evenly around the interceptor and risers with clean, crushed stone approximately 1" in size (AASHTO M43 Size #57 or similar) free of debris and fines. **Native soil and sand are not approved backfill materials.**

DO NOT COMPACT BACKFILL

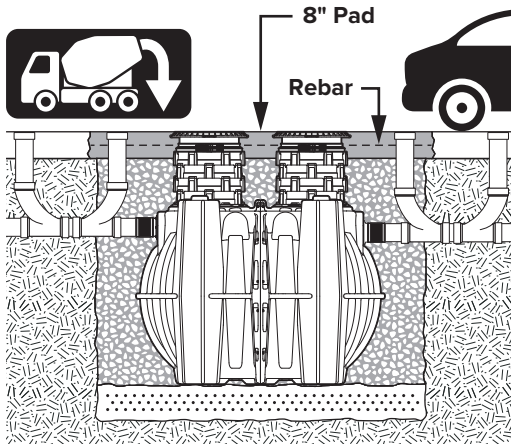


Note: Do not mechanically compact the backfill over top and around the interceptor.

12 Concrete pad at grade required ONLY



Failure to follow this guidance will void your warranty

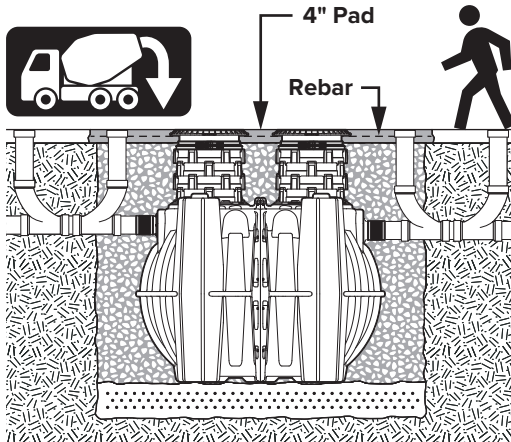


12a Vehicular traffic areas

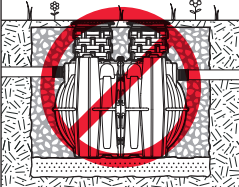
- Concrete pad at grade must have a minimum thickness of 8" and be reinforced with rebar. An alternate 6" pad may be allowed if the site/civil engineer has provided written calculations and stamped approval that has been submitted and approved by Schier Products.
- Pad dimensions must extend 18" beyond the silhouette of the interceptor; 128" x 110" for the GB-1000.
- Concrete should have 28 day compressive strength of 4,000 PSI.
- Use No. 4 rebar ($\varnothing \frac{1}{2}$ ") grade 60 steel per ASTM A615: connected with tie wire.
- Rebar to be 2½" from the edge of the concrete and spaced in a 12" grid with 4" spacing around access openings.

12b Pedestrian traffic or greenspace areas

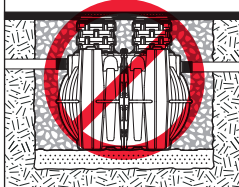
- Concrete slab at grade must have a minimum thickness of 4" and be reinforced with rebar.
- Follow all other guidelines for vehicular traffic areas



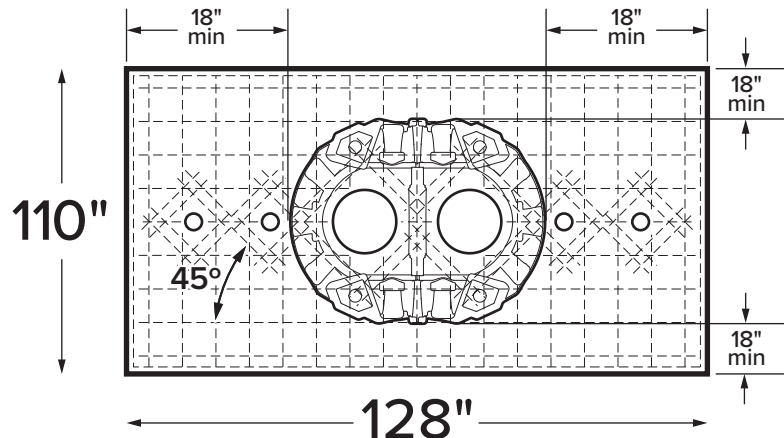
Do not install using native soil at grade.



Do not install using asphalt pad.



CONCRETE PAD and rebar specifications for 4", 6" and 8" pads



NOTE: Use rebar support chairs to vertically position rebar in the middle of the pad and prevent rebar movement during concrete pour.

OPTIONAL PUMPOUT PORTS

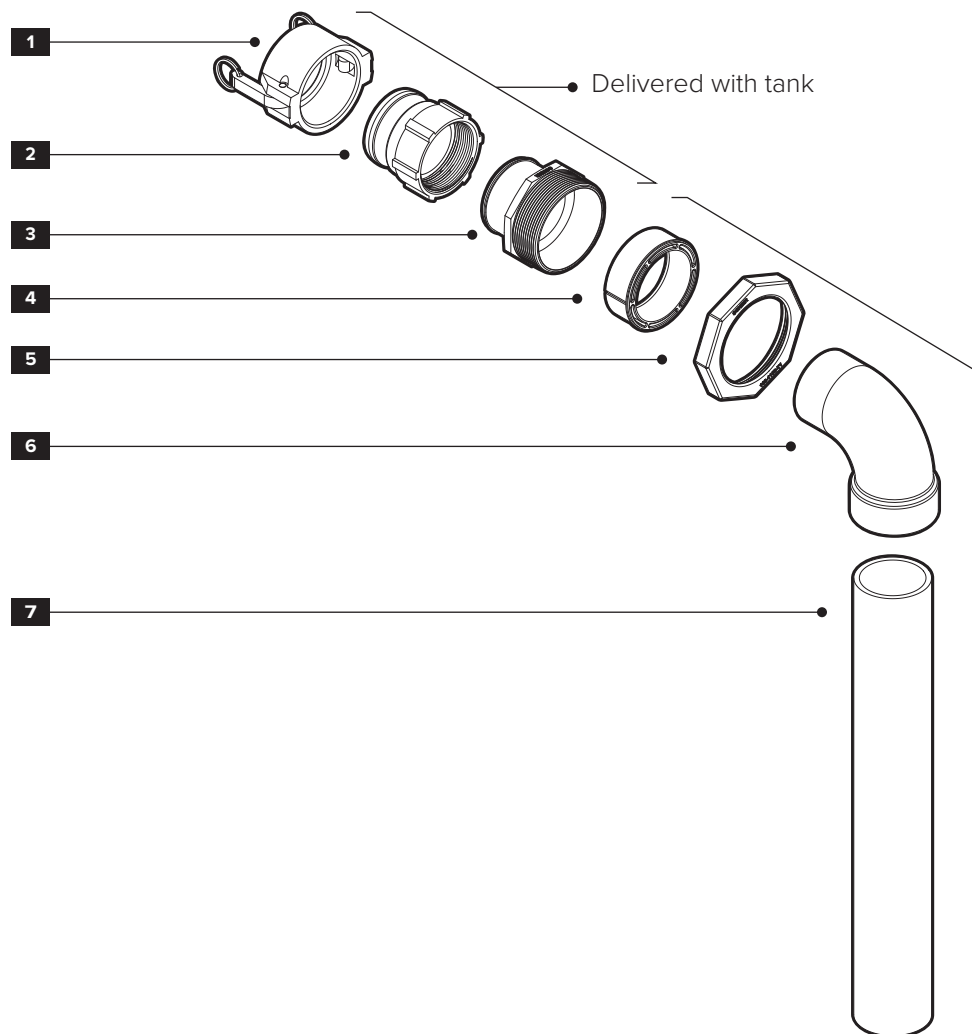
The GB-1000 is NOT manufactured standard with pump-out port connections and pump-out port connections CANNOT be added after the interceptor has left the factory.

Pump-out ports are an available accessory on the GB-1000. However, the pump-out ports must be ordered with the interceptor so they can be installed during manufacturing.

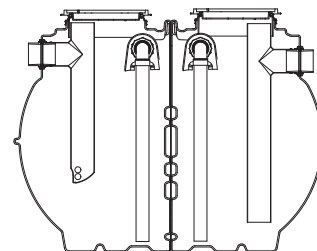
Note: When selected, the GB-1000 will be manufactured with four pump-out port connections for installation convenience. However, only two of the four pump-out ports will be connected and active; one for each chamber. The unused pump-out ports must be plugged by the installer.

If it's decided in the field that the pre-installed pump-out port connections are not needed, they may be plugged with the 4" cleanout plugs provided.

Pumpout Port Components (x2)



Pumpout Port Components (x2)



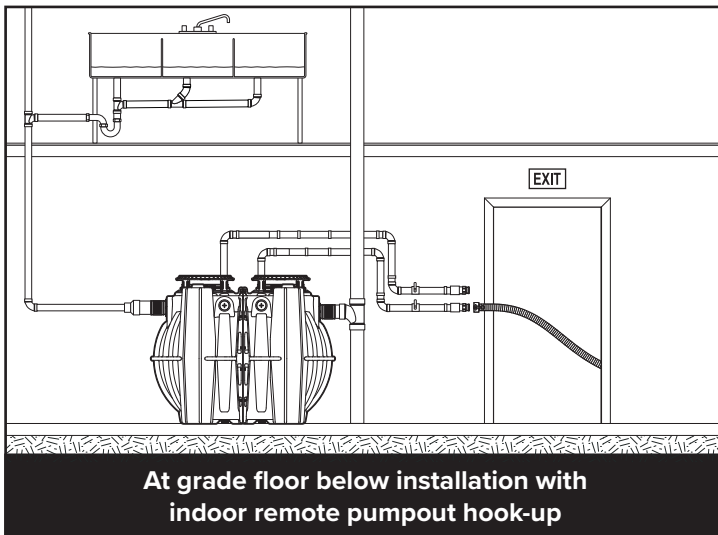
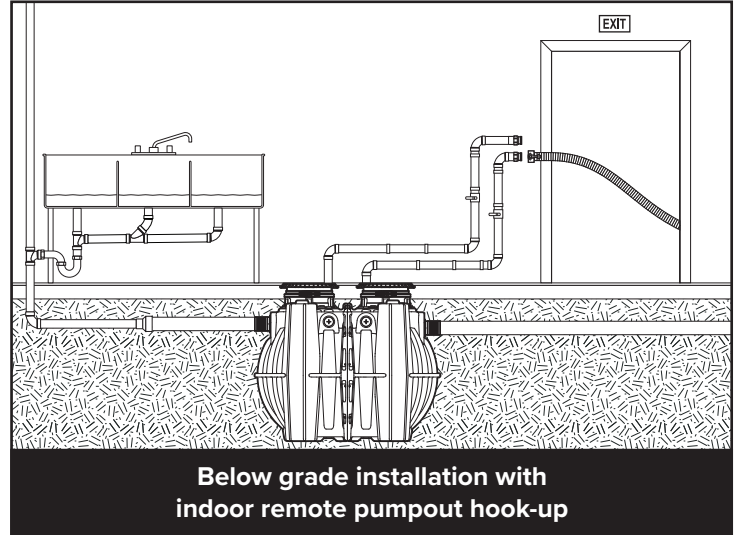
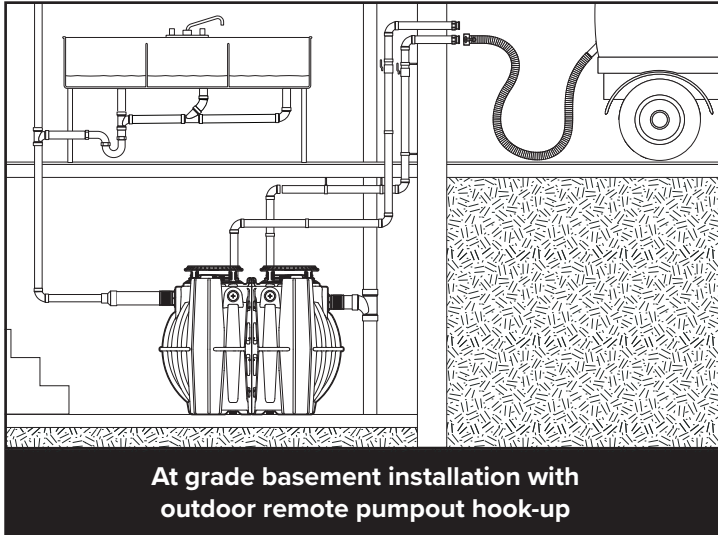
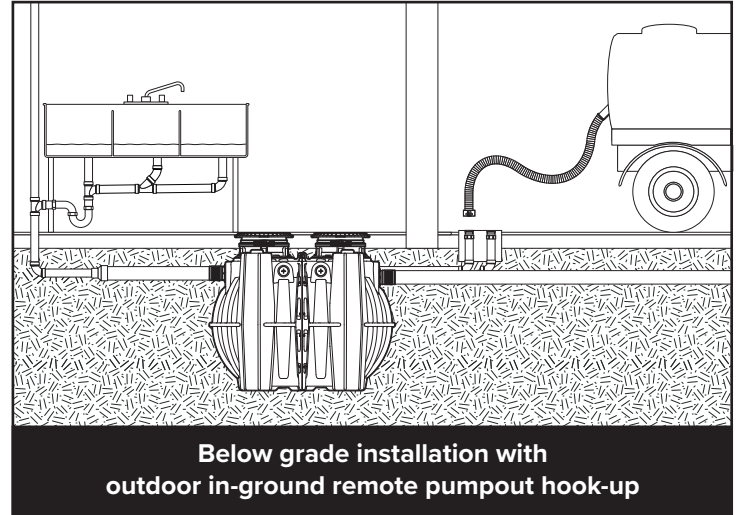
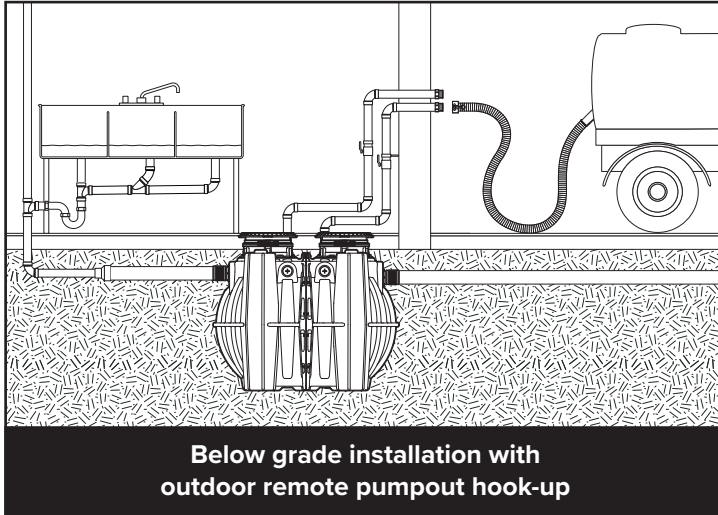
- | | | |
|----------------------------------|--|-------------------------|
| 1. 3" cam and groove cap | 4. 4" x 3" PVC pumpout adapter | 6. 3" PVC elbow fitting |
| 2. 3" cam and groove fitting | 5. Bulkhead connection retaining nut (green) | 7. Internal 3" PVC pipe |
| 3. 4" MPT x 3" plain end fitting | | |

Installation notes

1. Maximum vertical distance from static water line of grease interceptor to pumpout port hook-up shall not exceed 21 feet.
2. Maximum horizontal distance from grease interceptor to pumpout truck (including pumper hose) shall not exceed 100 feet.
3. Plumbing from interceptor to hook-up to have a maximum quantity of 6 elbow fittings
4. Designed for a maximum 3" pump-out line diameter
5. Solid wall PVC recommended for pump-out line. Do not use foam core PVC.
6. Additional plumbing fitting(s) required to complete kit installation.
7. A valve is recommended on the pump-out line for odor and overflow containment.

PUMPOUT PORT INSTALLATION IDEAS

Use the following illustrations for guidance to plan your pumpout ports piping layout.



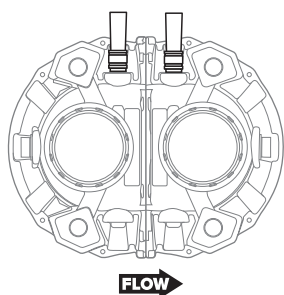
PUMPOUT PORT INSTALLATION

1 Plan pumpout plumbing

See **"PUMPOUT PORT INSTALLATION IDEAS"** for guidance. Choose two pumpout port connections on the interceptor and choose a location for the pumpout hook-up. **NOTE:** This kit does not include the plumbing from the interceptor to the hook-up location. You will need to plan out the pumpout plumbing based on site conditions and local codes and provide all additional piping, valves, connections and hardware needed to complete this installation.

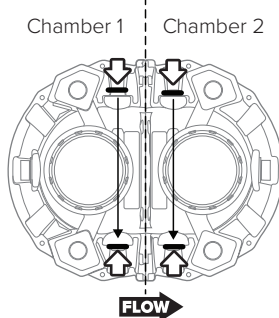
2 Move pumpout port connections if needed

Connections shown as shipped



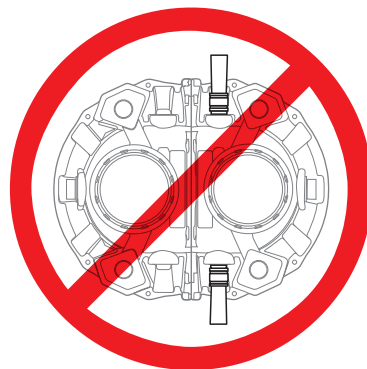
Pump-out ports with internal pipe assembly at location shown. From factory.

Relocate connections as needed - one per chamber

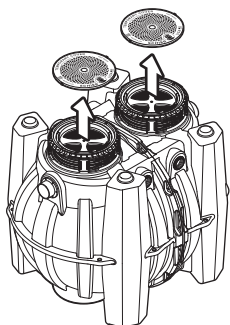


Unused connections must be plugged.

Only one connection per chamber.

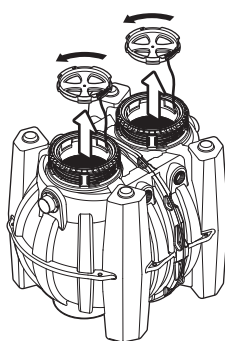


2a



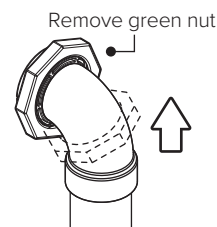
Remove cover bolts (if applicable), then remove covers.

2b



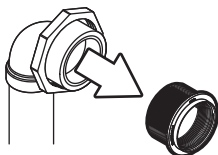
Rotate Safety Star® inserts counter-clockwise to unlock and remove, leaving tethered to unit.

2c



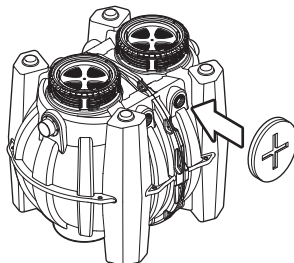
Unthread green retaining nut and remove internal pipe assembly from connection that will not be used.

2d



Place internal pipe assembly onto desired internal connection on the opposite sidewall of the same chamber. Ensure piping assembly is pointed downward and securely hand tighten green retaining nut.

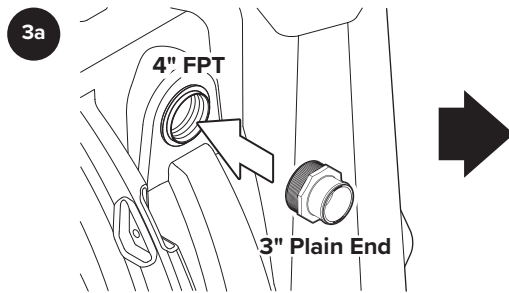
2e



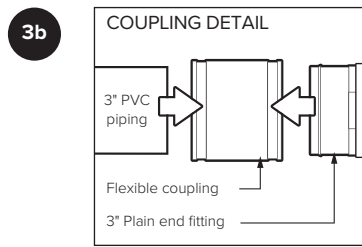
Install cleanout plugs to two unused pumpout port connections.

PUMPOUT PORT INSTALLATION

3 Connect external piping



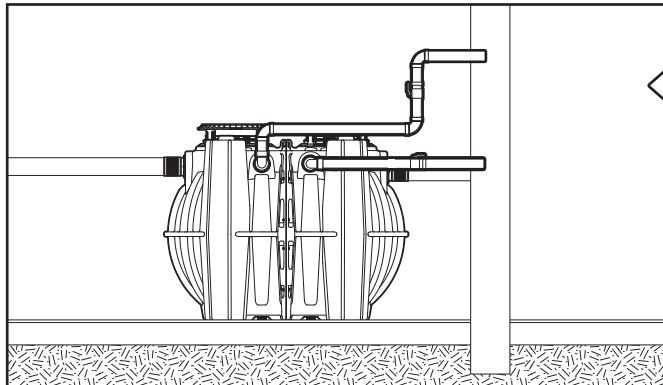
Install 4" MPT x 3" plain end fittings into desired external connections using pipe thread sealant or tape.



Mechanically couple 3" PVC piping to pumpout port connection on interceptor. **Do not solvent weld.**

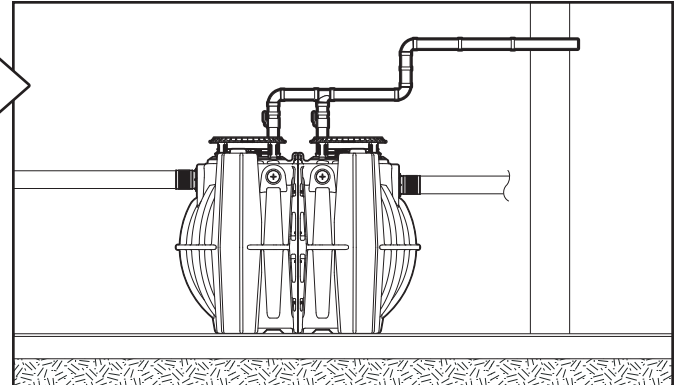
3c

Configuration 1 - Two independent pumpout lines



Install 3" PVC piping, connections, valves and/or hardware from the interceptor to the hook-up location. (Not included with this unit) **See installation notes on page 12 for piping guidelines.**

Configuration 2 - Manifold pumpout lines (valves required)



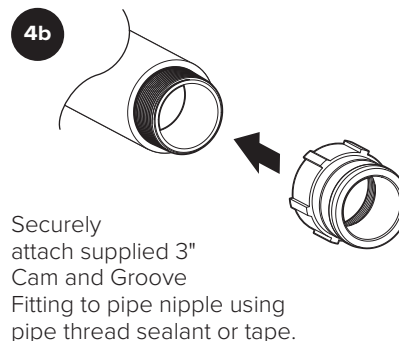
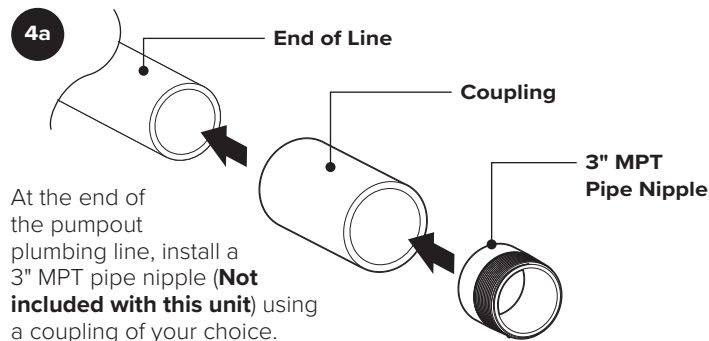
Install 3" PVC piping, connections, valves and/or hardware from the interceptor to the hook-up location. (Not included with this unit) **See installation notes on page 12 for piping guidelines.**

The two pumpout lines will manifold into one central line. A valve will need to be installed on each pumpout line prior to the manifold. The interceptor compartments will be pumped out one at a time by opening one compartment's valve and leaving the other closed to isolate the compartment and ensure vacuum isn't lost during the pumping process.

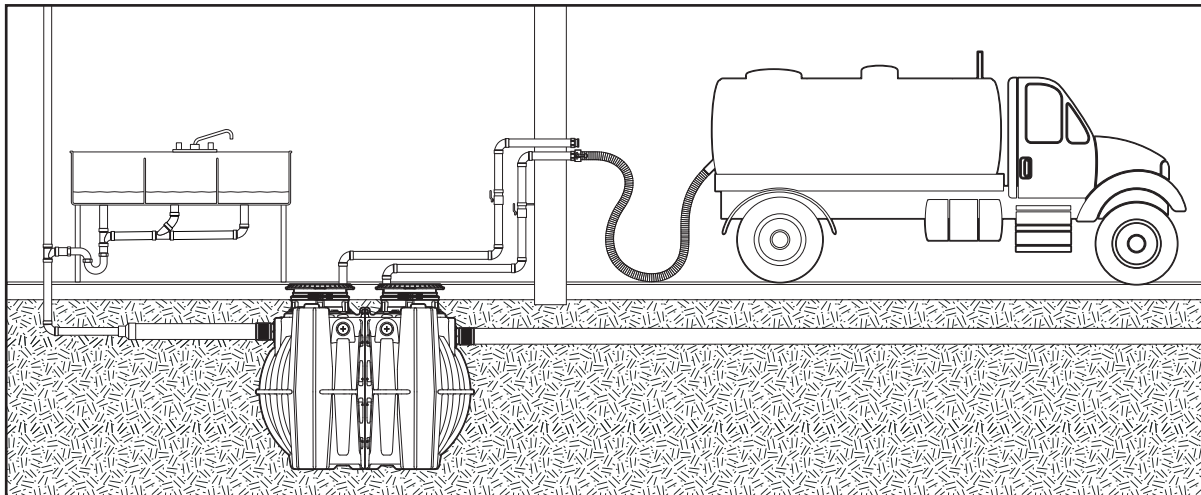
Note: This option will require additional instruction for the pumper and should only be used when the pumper will have access to valves during pump out.

PUMPOUT PORT INSTALLATION

4 Connect pumpout hook-up

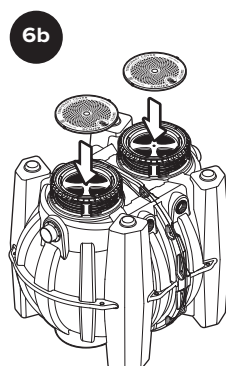
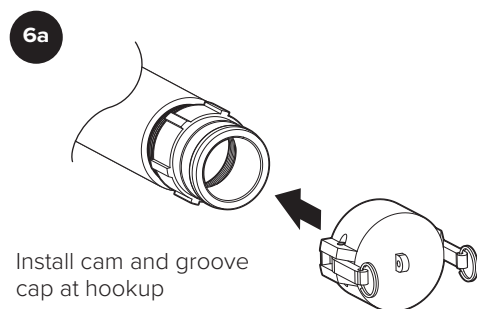


5 Test pumpout port



Run sinks to ensure interceptor is full of water. Attach pumper hose to 3" cam and groove fitting. Turn on pump, make sure interceptor is pumped out and inspect pumpout plumbing for leaks.

6 Cap off hookup and re-assemble interceptor



Replace safety star insert and cover, tightening cover bolts securely (if applicable).