Weekly Inspections –Hanging Hardware

HANGING HARDWARE SYSTEM					
Component	**Procedure**	**Fail Criteria**	**Corrective Action**	**Reference Manuals**	**Authorized Personnel**
Nozzle Hose Breakaway	Inspect each hose, breakaway, and nozzle for loose connections or leaks	Presence of a leak	Tighten connections or replace with new product	IOM-6	**Nozzle, hose, or breakaway replacement**: GDF owner/operator or VST ASC Levels A, B, C, or D or EMCO Level A **Component repair:** VST ASC Levels A, B, or C or EMCO Level A
		Presence of residue from a leak	Tighten connections or replace with new product	IOM-8	
		Visible o-ring between any component connection	Tighten connections or replace with new product	IOM-9	
CO-AXIAL HOSES					
Component	**Procedure**	**Fail Criteria**	**Corrective Action**	**Reference Manuals**	**Authorized Personnel**
Coaxial Hose	Inspect hoses for wear, severe kinks, cracks, splitting, and functional swivels	Kinks, cracks, splitting, non-functional swivels, or any visible openings	Replace with new hose	IOM-8	**Hose replacement:** GDF owner/operator or VST ASC Levels A, B, C, or D or EMCO Level A
BREAKAWAY					
Component	**Procedure**	**Fail Criteria**	**Corrective Action**	**Reference Manuals**	**Authorized Personnel**
Breakaway	Inspect breakaway for leaks around the scuff	Presence of a leak around the scuff	Replace with new breakaway	IOM-9	**Replace breakaway:** GDF Owner/Operator or VST ASC Levels A, B, C, or D or or EMCO Level A

VST NOZZLE					
Nozzle Component	**Procedure**	**Fail Criteria**	**Corrective Action**	**Reference Manuals**	**Authorized Personnel**
Nozzle lever, lever guard, lever lock	Inspect for imperfections, cuts, or damage to the: Nozzle Lever Lever Guard Lever Lock Spout Spout Vent Hole Face Seal Interlock Rod Vapor Collection Sleeve.	Damaged or missing	Replace with new VST nozzle	IOM-6	**Nozzle Replacement:** GDF Owner/Operator or VST ASC Levels A, B, C, or D
Nozzle Spout		Sheared or bent	Replace nozzle spout assembly with new VST Front-End Kit or Replace with new VST nozzle	IOM-7 IOM-6	**Front-End Repair:** VST ASC Levels A, B, C, or D**Nozzle Replacement:** GDF Owner/Operator or VST ASC Levels A, B, C, or D
Nozzle Vent Hole		Vent hole blocked	Clear blockage	IOM-6	**Blockage Repair:** GDF Owner/Operator or VST ASC Levels A, B, C, or D
Nozzle Collection Sleeve		If greater than 18 inches total length of cuts (if greater than 0 .4 sq. inches of material missing)	Replace vapor collection kit	IOM-7	**Front-End Repair:** VST ASC Levels A, B, C, or D
			Replace nozzle with new VST nozzle	IOM-6	**Nozzle Replacement:** GDF Owner/Operator or VST ASC Levels A, B, C, or D
Nozzle Face Seal		Greater than 30% of the material is missing (if greater than 2.5 inches of the accumulated faceplate circumference is missing)	Replace vapor collection kit	IOM-7	**Front-End Repair:** VST ASC Levels A, B, C, or D
			Replace nozzle with new VST nozzle	IOM-6	**Nozzle Replacement:** GDF Owner/Operator or VST ASC Levels A, B, C, or D
Nozzle Front-End Kit (Collection sleeve and face seal)		Alignment lines are misaligned and/or the assembly is askew	Replace vapor collection kit	IOM-7	**Front-End Repair:** VST ASC Levels A, B, C, or D
			Replace nozzle with new VST nozzle	IOM-6	**Nozzle Replacement:** GDF Owner/Operator or VST ASC Levels A, B, C, or D
Nozzle Interlock Rod	Nozzle Inspection	Interlock rod sticks during engagement or disengagement	Replace vapor collection kit	IOM-7	**Front-End Repair:** VST ASC Levels A, B, C, or D
			Replace nozzle with new VST nozzle	IOM-6	**Nozzle Replacement:** GDF Owner/Operator or VST ASC Levels A, B, C, or D

Weekly Interlock Inspection – VST Nozzles

Fueling Point #	Check A		Check B	
	Pass	Fail	Pass	Fail

Fueling Point #	Check A		Check B	
	Pass	Fail	Pass	Fail

Inspected by: _____Date: _____ Inspected by: _____Date: _____

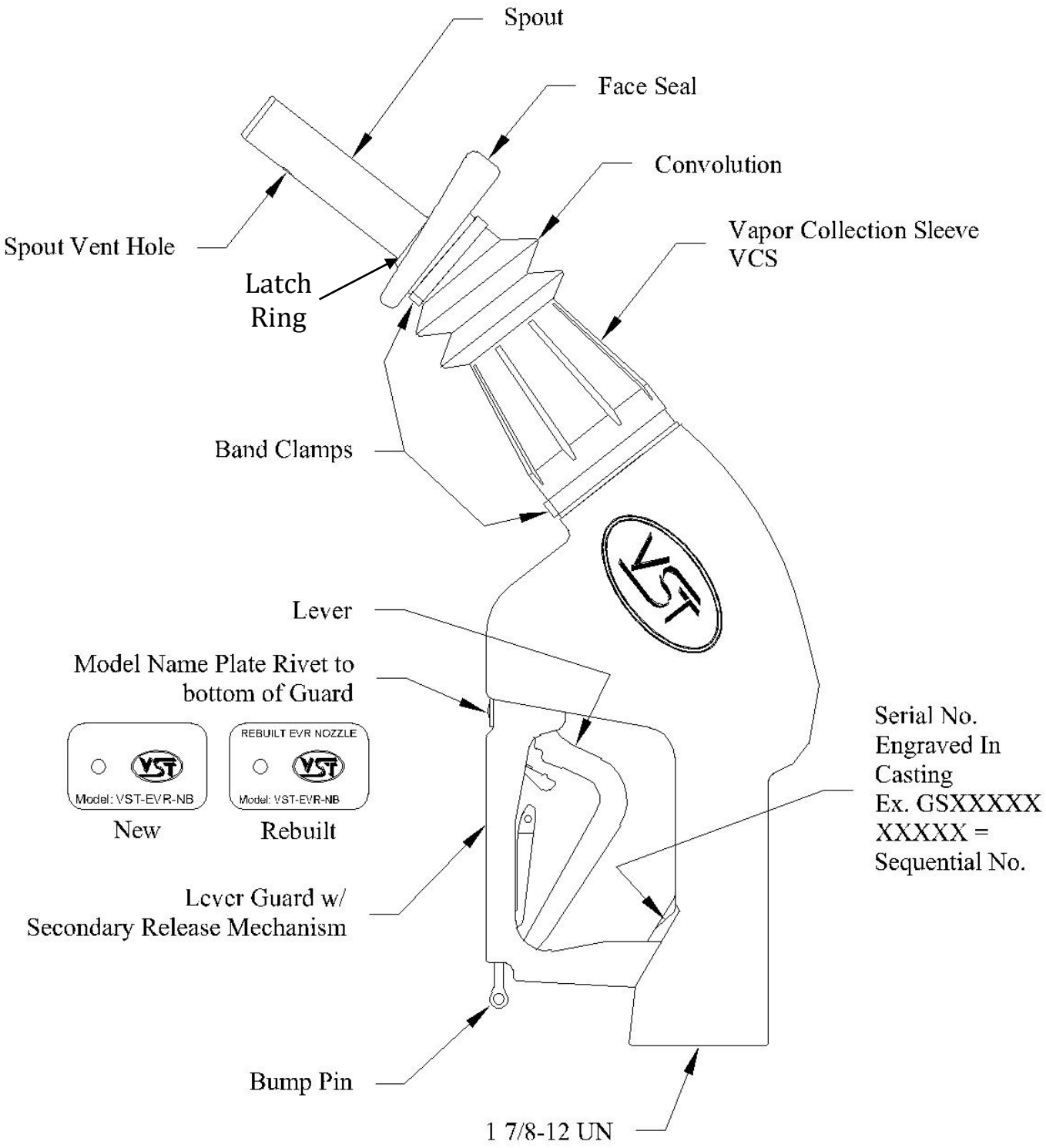
Check A

1) Make sure dispenser is de-activated (**do not turn dispenser on**).
2) Lift the nozzle from the dispenser cradle without touching the lever.
3) If hold-open latch is engaged, the nozzle fails. Tag out this Fueling Point and have the nozzle immediately serviced or replaced.
4) Point nozzle spout into a gasoline compatible container. Do not compress vapor collection sleeve (VCS).
5) Pull lever to make sure there is no spring tension.
   If the lever has **no** spring tension (dead lever), the nozzle passes.
   If the lever has spring tension (live lever i.e. same as dispensing fuel), the nozzle fails.
6) If Check A fails, tag out this Fueling Point and have the nozzle immediately serviced or replaced. Reference nozzle installation or nozzle repair instructions in the ARB Approved Installation, Operation, and Maintenance Manual of the appropriate Executive Order.
7) If Check A passes, proceed to Check B.

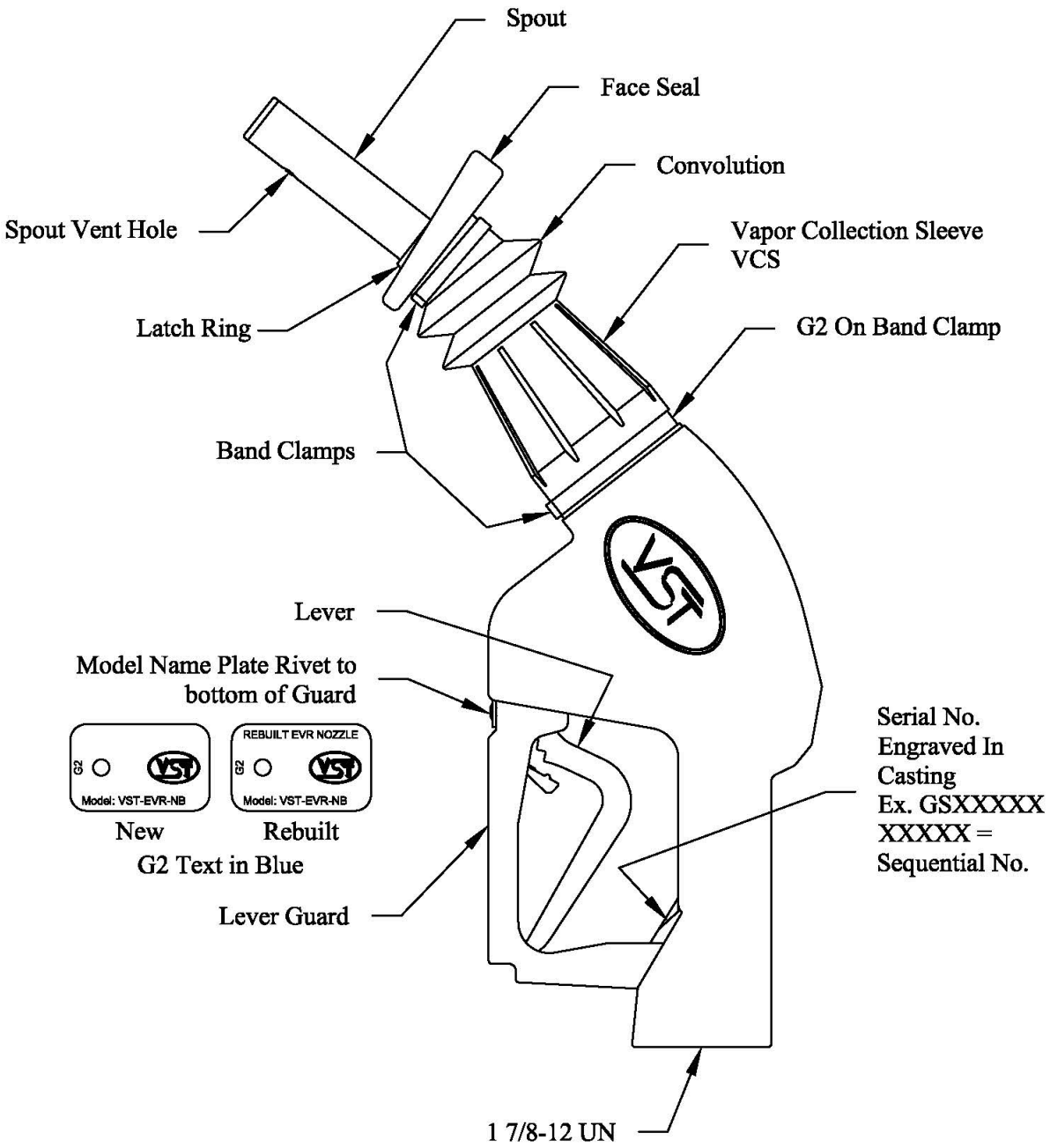
Check B

1) While still pointing the nozzle spout in the gasoline compatible container and with the dispenser de-activated, compress the vapor collection sleeve (VCS) by pressing on the face seal, and confirm the lever has spring tension (live lever).
2) Release the VCS and the lever. Then pull the lever and confirm the lever has **no** spring tension (dead lever). Make sure that the face seal is not caught on the spout latch ring.
3) If lever goes live when the VCS is compressed, and goes dead after the VCS and lever are released, then the nozzle passes.
4) If lever stays dead (when the VCS is compressed) **or** stays live (after the VCS and lever are released), then the nozzle fails.
5) If check B fails, tag out this Fueling Point and have the nozzle immediately serviced or replaced. Reference nozzle installation or nozzle repair instructions in the ARB Approved Installation, Operation, and Maintenance Manual of the appropriate Executive Order.

VST Nozzle


Spout
Face Seal
Convolution
Spout Vent Hole
Latch Ring
Vapor Collection Sleeve VCS
Band Clamps
Lever
Model Name Plate Rivet to bottom of Guard
REBUILT EVR NOZZLE
Model: VST-EVR-NB
Model: VST-EVR-NB
New
Rebuilt
Serial No. Engraved In Casting Ex. GSXXXXX XXXXX = Sequential No.
Lever Guard w/ Secondary Release Mechanism
Bump Pin
1 7/8-12 UN

VST G2 Nozzle

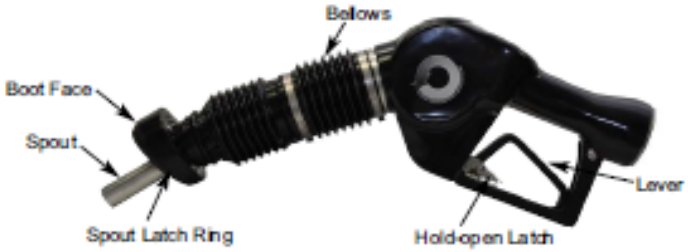


EMCO NOZZLE					
Nozzle Component	**Procedure**	**Fail Criteria**	**Corrective Action**	**Reference Manuals**	**Authorized Personnel**
Lever, Hold Open Latch, Lever Guard	Inspect for defects, cuts or damage to the: Lever Hold Open Latch Lever Guard Spout	Damaged or missing	Replace with new EMCO latch kit or nozzle	IOM – 6	**Latch Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A
Spout		Sheared or bent	Replace with new EMCO Spout Kit or nozzle	IOM – 6 IOM - 7	**Spout Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/ Operator or EMCO Certified Technician Level A
Spout Vent Hole	Inspect for defects, cuts or damage to the: Spout Vent Hole Boot Face Bellows	Vent hole blocked	Clear blockage	IOM – 6	**Blockage Repair:** GDF Owner/Operator or EMCO Certified Technician Level A
Boot Face		> than 0.4 sq. inches of boot face material is missing (e.g. A triangular or similar shape in which greater than 7/16 inches of the boot face circumference is missing [accumulated])	Replace with new EMCO boot face kit or nozzle	IOM – 6 IOM - 7	**Boot Face Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A
Bellows		A cut across 7 consecutive bellows convolutions	Replace with new EMCO bellows kit or nozzle	IOM – 6 IOM - 7	**Bellows Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A

EMCO NOZZLE					
Insertion Interlock Rod	Inspect for defects, cuts or damage to the: Insertion Interlock Rod Band Clamps Serial Plate Security Rivet	Insertion interlock rod sticks during engagement or disengagement	Replace with new EMCO Spout Kit or nozzle	IOM – 6 IOM - 7	**Spout Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A
Band Clamps		Damaged or missing	Replace with new EMCO band clamp kit or nozzle	IOM – 6 IOM - 7	**Band Clamp Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A
Serial Plate, Security Rivet		Damaged or missing	Replace with new EMCO nozzle	IOM – 6	**Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A

EMCO® WHEATON RETAIL

Models A4005EVR & RA4005EVR Balance Vapor Recovery Nozzles Weekly Insertion Interlock Test Procedure



Objective: The purpose of this test procedure is to verify proper field operation of the Model A4005EVR nozzle insertion interlock during engagement or disengagement.

Service Tools Required:

- Gasoline Approved Container
- Protective Gloves

CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser during testing of the nozzle.
2. Always use a gasoline approved container when performing any type of testing or preventive maintenance on hanging hardware components. (nozzle, hose swivel, breakaway and hoses)
3. Always point the end of the spout downwards into a gasoline approved container when performing the Weekly Insertion Interlock Test Procedure. Failure may result in a hazardous gasoline spill or personal injury and/ or death.
4. Always make sure the dispenser is de-activated (off) while performing the Weekly Insertion Interlock Test Procedure. Failure may result in a hazardous gasoline spill or personal injury and/ or death.

Lever Verification:

1. Remove the nozzle from the dispenser cradle without touching the lever. If the hold-open latch is engaged, the nozzle fails. The nozzle shall not be used and must be immediately taken out of service.

2. Point the end of the spout downwards into a gasoline approval container. Engage (squeeze) the lever without compressing the bellows. Perform this step a minimum of three times to assure the lever has free motion and no tension (dead lever).

IMPORTANT: If at any time while performing step 2 the lever exhibits tension (live lever), the nozzle fails. The nozzle shall not be used and must be immediately taken out of service.

3. If the lever exhibits no tension (dead lever) while performing step 2, the nozzle has successfully passed. Record the results on the Lever Verification Form and proceed to step 4.

EMCO® WHEATON RETAIL

Models A4005EVR & RA4005EVR
Balance Vapor Recovery Nozzles
Weekly Insertion Interlock Test Procedure

Insertion Interlock Verification:

4. While pointing the end of the spout downwards into a gasoline approved container compress the bellows from its "free" extended position, and engage (squeeze) the lever. If the lever exhibits no tension (dead lever), the nozzle fails. The nozzle shall not be used and must be immediately taken out of service.

IMPORTANT: When compressing the bellows, the lever will exhibit tension (live lever) allowing both the fuel and vapor valves inside the nozzle to open to atmosphere.

7. If the lever exhibits no tension (dead lever) while performing step 6, the nozzle has successfully passed. Place the nozzle back on the dispenser cradle and record the results on the Insertion Interlock Verification Form.

5. While keeping the lever engaged, slowly allow the bellows to extend to its "free" position in a controlled manner that simulates removing the nozzle from a vehicle fill pipe. Make sure that the boot face is not caught on the spout latch ring.

IMPORTANT: The fuel and vapor valves will close once the bellows reaches its extended position. A "click" will indicate both valves are closed and the insertion interlock is disengaged.

6. While pointing the end of the spout downwards into a gasoline approved container, engage (squeeze) the lever without compressing the bellows. Perform this step a minimum of three times to assure the lever has free motion and no tension (dead lever).

IMPORTANT: If at any time while performing step 6 the lever exhibits tension (live lever), the nozzle fails. The nozzle shall not be used and must be immediately taken out of service.

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Rev. A, 11/12

EMCO® WHEATON RETAIL

Models A4005EVR & RA4005EVR Balance Vapor Recovery Nozzles
Weekly Insertion Interlock Test Procedure

Facility: ______________________ Facility Address: ______________________

Lever Verification Form

Fueling Point #																		
Pass																		
Fail																		

Insertion Interlock Verification Form

Fueling Point #																		
Pass																		
Fail																		

Date: ____________ Performed by: ______________________

Lever Verification Form

Fueling Point #																		
Pass																		
Fail																		

Insertion Interlock Verification Form

Fueling Point #																		
Pass																		
Fail																		

Date: ____________ Performed by: ______________________

Lever Verification Form

Fueling Point #																		
Pass																		
Fail																		

Insertion Interlock Verification Form

Fueling Point #																		
Pass																		
Fail																		

Date: ____________ Performed by: ______________________

Lever Verification Form

Fueling Point #																		
Pass																		
Fail																		

Insertion Interlock Verification Form

Fueling Point #																		
Pass																		
Fail																		

Date: ____________ Performed by: ______________________

Weekly Inspection and Testing Checklist				
Checklist results may be used to assist with filling out GDF maintenance log.			Date:	Page: ______of_____
Dispenser Number	Unihose or Fuel Grade (circle one)	Nozzle Inspection (circle one)	Hose Inspection (circle one)	Breakaway (circle one)
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other __________	Pass Fail	Pass Fail	Pass Fail