

SPS 340.70 Compressed Natural Gas Systems (CNG) Checklist Vehicular Fuel Gas Systems Code NFPA 52 – 2010 Ed

Owner:	City;	_State/zip
Location:	Contact Phone:	Cell:
Tank Manufacturers	Tank Capaci	ty Year Built
Vessel Marking: NB/Ser No (Circle one)	MAWP QT	Y

Vessel Marking:	NB/Ser No MAWP QTY					
	(Circle one)					
Code Section NFPA-30A Chap 12	Item Description					
& para. 4.3.7.2	SPS 340.42(1) This chapter shall apply where CNG is dispensed as motor vehicle fuel along with Class I or Class II liquids. NFPA 30A 4.3.7.2 Guard Posts or other approved means					
General CNG Requirements and Equipment Qualifications						
4.4.1 – 4.4.3	Container material; marking; prior Mfg.					
4.4.4 - 4.4.4.2	Cylinder Mfg; marking; test; insp. etc.					
4.4.5.1- 4.4.5.3	ASME Compliance vessels					
4.4.7 -4.4.7.1	Repair & Alteration ASME vessels					
4.5.2	Stationary Vessels Have ASME PRVS.					
4.5.2.2 - 4.5.2.2.3	Pressure Relief valves adjustment seals, repair.					
4.6	Pressure Gauge 1.2 X system design Pressure					
4.7 - 4.7.2	Pressure regulators					
4.8.1 – 4.8.5	Fuel lines; ASME B31.3; materials; Piping components design F.S. of 3					
4.9.1 - 4.9.4	Valves; Bodies Marked for service ratings					
4.10.1 – 4.10.4	Hose and Connections design burst = 4 X service press.					
	CNG Compression, Gas Processing, Storage, and Dispensing Systems					
8.3.1	If served by utility is utility notified					
8.3.2	Protection from damage and vandalism					
8.3.7 -8.3.12	Compression equipment requirements					
8.4.1.2	General foundation requirements to adopted bldg code					
	OUTDOORS					
8.4.2.2	Acceptable Sheltered construction considered outdoors					
8.4.2.3	Equipment not under power lines 10' Bldg/property line					
8.4.2.4	Equipment not < 10'-Sidewalk and 50'-Rail road					
8.4.2.5	Clear Area of 3'access to Valves/fittings of multi-group Container					
8.4.2.6	No Combustibles within 10' of Container					
8.4.2.7	Minimum Separation of Container and combustible liquids shall be 20'					
8.4.2.8	Point of Transfer > 10' from building/home/sidewalk etc.3' from storage INDOORS					
8.4.3.1	General requirement allowing equipment indoors					
8.4.3.2	Limit of Storage in Buildings 10,000 scf					
8.4.3.3 – 8.4.3.3.2	Deflagration venting					
8.4.3.4 – 8.4.3.4.6	Rooms within bldgs. Construction & Venting					
8.4.3.5 -8.4.3.5.3	Ventilation inlets & outlets					
8.4.3.5.4 – 8.4.3.7	Ventilation Systems; flow rates; Auto shut downs; gas detection					
8.4.3.8 -8.4.3.9	Electrical classification					
8.4.3.10	PRD venting					
8.4.3.11 – 8.4.3.11.2	Warning Signs					
8.4.3.12 - 8.4.3.12.2	Indoor Fast Filling, Outdoor Storage & Compression					
Installation of Containers and Appurtenances						
8.5.1 – 8.5.1.2	Storage containers Foundations / Vaults; 2 support points; anchored if flood area					
8.5.2 – 8.5.2.2	Containers shall be Painted; no direct contact; composite per mfg					
8.5.3	Prevent combustible liquids under tanks by grading, pads, curbs					
8.6.1	Pressure Relief discharge is to safe local					
8.6.2	PV relief valve discharge vertical & caps					
8.6.3	OPD installed in fuel transfer system					
8.6.4	Set pressure of OPD 125% fuel nozzle supply					
8.6.5 – 8.6.6	Port block valves if approved and locks					
8.7.1 -8.7.2	Pressure Regulators protected from elements; insects; crud!					
8.8	Gauges or other readouts installed for Compression discharge pressure, Storage pressure, and Dispenser discharge					
8.9.1 - 8.9.1.3	Piping & Hose installation conditions for AG & UG location					

8.9.1.4	Threaded pipe shall not be under ground			
8.9.1.5.1	Shield container manifolds protected location or shielded from objects			
8.9.1.5.2	Pipe joint material for NG applied to all male threads			
8.9.1.5.4	Pipe bending prohibited / weakens tubing			
8.9.1.5.5 – 8.9.1.5.6	Joints located in accessible location and number of joints minimized			
8.9.2.1 – 8.9.2.2	Stack vent opening caps and provide for drainage			
8.9.3 (1) – (3)	Hose use limited to vehicle fueling; Inlet to compression equipment; metallic hose \leq 36" for flexability			
8.9.3.1 – 8.9.3.2	Installed so protected; visible for inspection; Mfg. I.D. retained each section			
8.9.4	Cal and test gas vented to safe location			
8.10.1	Pipe/tube/hose leak test = normal service pressure for each section			
8.10.2	Pressure relief valve tested every 3 years			
8.11.1.1 - 8.11.1.4	Manual Shut-off valve for DOT and TC containers each group ASME vessels Max 10,000 Scf shall have			
	and in manifolds and their location			
8.11.2 - 8.11.3	Fill line on container shall have backflow & excess-flow check valve			
8.11.4	Piping from outdoor comp./storage into bldg. shut-off valves outside			
8.11.5 – 8.11.5.2	Emergency manual shutdown shall be at Dispensing area and remote location clearly marked			
8.11.6 - 8.11.6.3	Breakaway device requirements			
8.11.8.1	Fast fill station Each line between storage and dispenser Shall have self-closing valve.			
8.11.8.2	Fast fill station Fast close ¼ turn manual valve upstream of breakaway device			
8.11.9	Fast fill station self -closing valve on inlet of compressor			
8.12 – 8.13	Electrical to NFPA-70 –stray and impressed current and bonding			
8.14.1 – 8.14.2	Cylinder charging requirements			
8.14.3 – 8.14.4.2	Dispenser auto shut down requirements			
8.14.5 - 8.14.11	CNG transfer to container instructions, vehicle, depressurization & bleed			
8.14.12 - 8.14.12.4	Warning signs and there posting and visibility			
8.15	Fire protection 20lb B:C extinguisher			
8.16.1 – 8.16.2	System maintenance and records			
8.16.3 – 8.16.6	Hose assembly maintenance and test PRV maintenance			
8.16.7	Maintenance personnel leak detection training			
8.17.1 – 8.17.7	VFA's in non-residential occupancies			

NOTES:		

(R11/11)