

# Ford F-59 CNG UPS Service Parts Catalog 2019 P80 - Job # 20-16



F59NG.SM.0003 April 14, 2020



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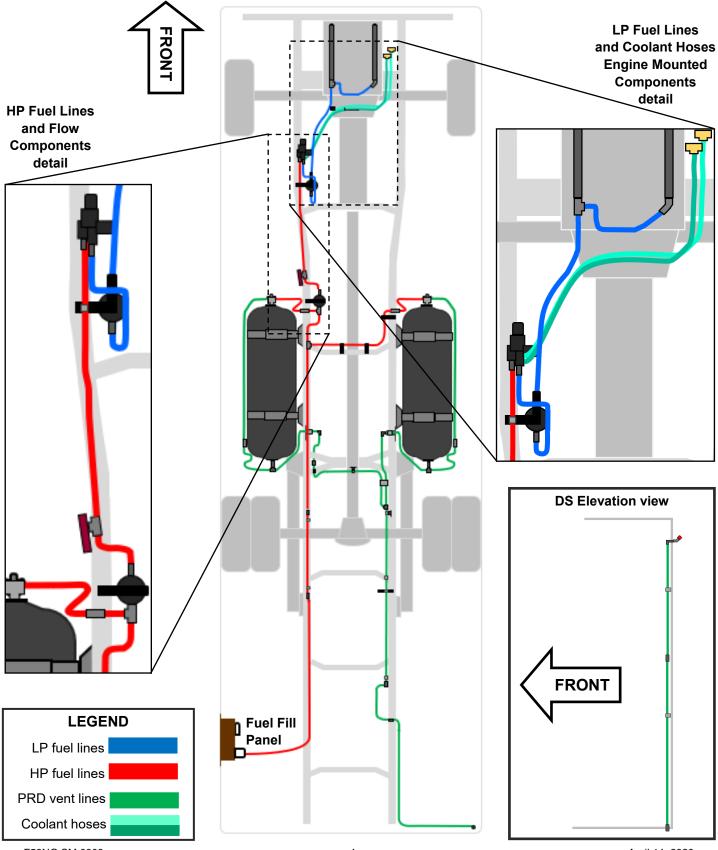
### **Abbreviations Used**

Item	Description
ASM	Assembly
CNG	Compressed natural gas
DS	Driver side
HP	High pressure
LP	Low pressure
NS	Not serviced
POA	Part of assembly
PRD	Pressure relief device
PS	Passenger side
T-PRD	Thermal PRD
WB	Wheelbase

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# Fuel System Schematic

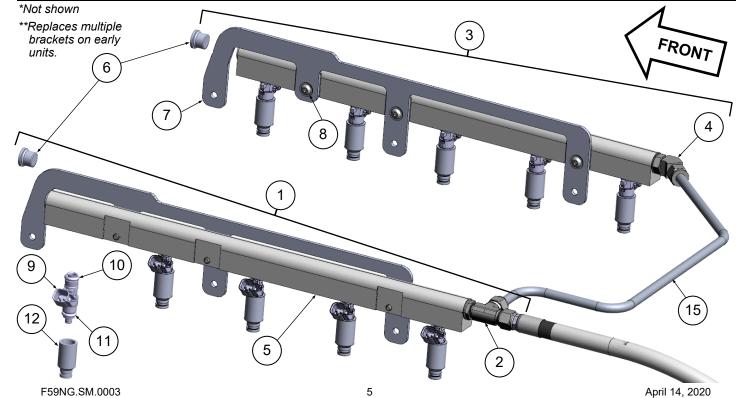


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# **Engine Mounted Parts**

Item	UPS p/n	Service p/n	Description	Chassis QTY
1		63100000	ASM, fuel rail, DS, 6.8L, CNG - includes 2, 5, 6, 7, (3) 8, (5) 9, (5) 11	1
2		10200226	Fitting, tee, fuel rail, driver side, 6.8L, CNG	1
3		63100001	ASM, fuel rail, PS, 6.8L, CNG - includes 4, 5, 6, 7, (3) 8, (5) 9, (5) 11	1
4		10200201	Fitting, 45-degree elbow, fuel rail, passenger side, 6.8L, CNG	1
5		61010013	Fuel rail, 6.8L, CNG (bare)	2
6		61180083	Fitting, straight plug, fuel rail, 6.8L, CNG	2
7**		62080038	Bracket, single piece, fuel rail, 6.8L, CNG	2
8		69000419	Screw, fuel rail bracket to fuel rail mounting, 6.8L CNG – SET OF 6	6
9		61020015	Fuel injector, 6.8L, CNG	10
10		69000420	O-ring, fuel injector, upper, black, 6.8L, CNG (POA 9) – SET OF 5	10
11		69000517	O-ring, fuel injector, lower, 6.8L, CNG (POA 9) – SET OF 5	10
12		61180042	Spacer, fuel injector, 6.8L, CNG	10
13*		69000421	O-ring, fuel injector spacer, 6.8L, CNG (POA 11) - SET OF 5	10
14*		61090096	Cap, vacuum	1
15		63060016	ASM, LP fuel tube, fuel rail crossover	1
16*		61090113	Bolt, fuel rail bracket to intake manifold mounting	6





### LP Fuel Lines & Coolant Hoses

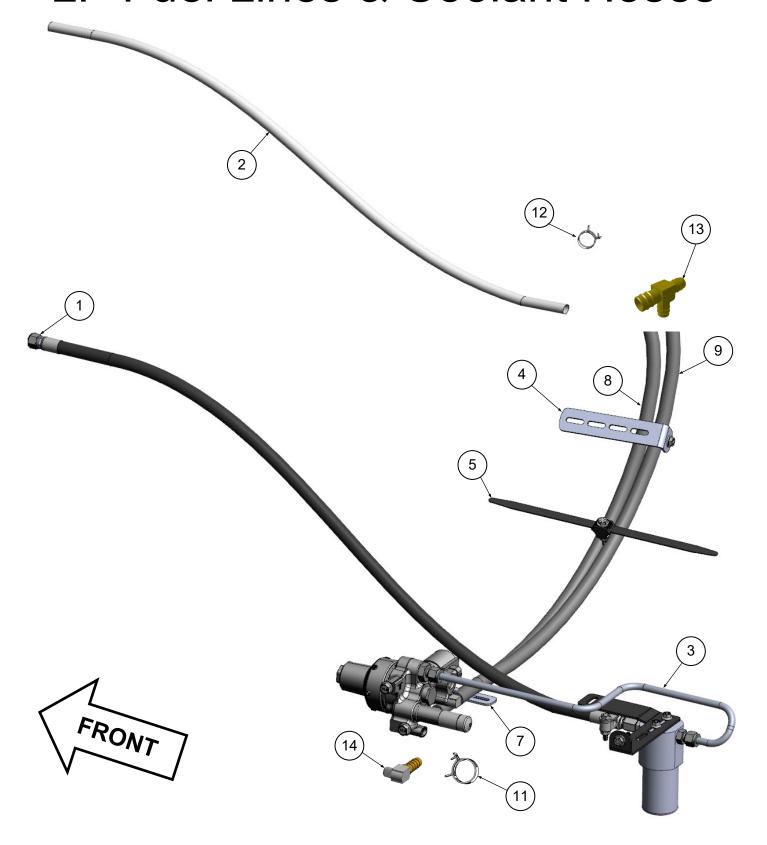
Item	UPS p/n	Service p/n	Description	Chassis QTY
1		63060009	Hose, LP fuel, flexible - includes fittings and heat sleeve	1
2		61270000	Heat sleeve, LP fuel hose	1
3		63060007	ASM, LP fuel tube, regulator to LP filter	1
4		69000504	ASM, bracket, coolant hose routing, with hardware	1
5		69000422	Clip, dual tie strap - SET OF 13	13
6*		69000423	Clip, single tie strap - SET OF 2	2
7		69000505	ASM, bracket, fuel and coolant hose, with hardware	1
8		61170039	Hose, pressure regulator coolant, supply	1
9		61170038	Hose, pressure regulator coolant, return	1
10*		61270001	Heat sleeve, pressure regulator coolant hose	2
11		61180044	Clamp, coolant hose, 3/4-in.	4
12		61180045	Clamp, coolant hose, 15/16-in.	4
13		61180033	Fitting, tee, coolant hose	2
14		61180046	Fitting, elbow, pressure regulator coolant port	2

<sup>\*</sup>Not illustrated

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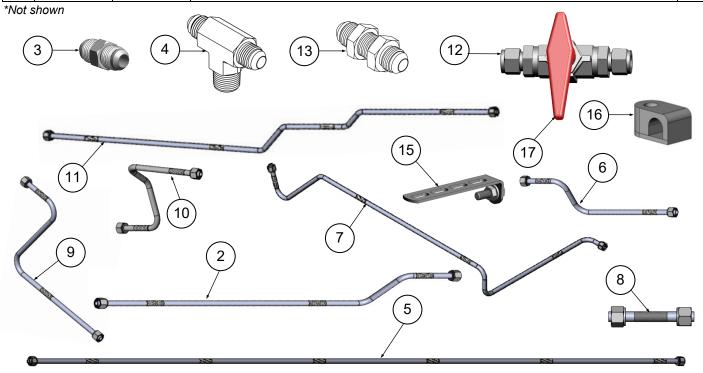
### LP Fuel Lines & Coolant Hoses





### **HP Fuel Lines**

Item	UPS p/n	Service p/n	Description	Chassis QTY
1		10300327	Hose, HP flexible fuel	1
2		63060001	ASM, HP fuel tube, hose to union	1
3		10200002	Fitting, union, 3/8-in.	2
4		10200207	Fitting, tee, 3/8-in.	1
5		63060002	ASM, HP fuel tube, union to tee, 168-in. WB	1
6		63060003	ASM, HP fuel tube, tee to tee, 168-in. WB	1
7		63060008	ASM, HP fuel tube, tank to tank crossover, 168-in. WB	1
8		63060006	ASM, HP fuel tube, HP filter tee to bulkhead	1
9		63060010	ASM, HP fuel tube, bulkhead to shutoff, 168-in. WB	2
10		63060004	ASM, HP fuel tube, HP filter to quarter turn valve	1
11		63060005	ASM, HP fuel tube, quarter turn valve to regulator	1
12	4820721	10300158	Valve, 1/4-turn manual shutoff [NOTE: includes (17)]	1
13		10200023	Fitting, straight, bulkhead, 3/8-in.	2
14*		69000424	Washer, bulkhead, flat, hardened steel - SET OF 5	8
15		69000510	ASM, bracket, 4-slot, with hardware	4
16		69000427	Clamp, tube, 3/8-in - SET OF 4	5
17	4823484	10300160	Valve handle, red	1

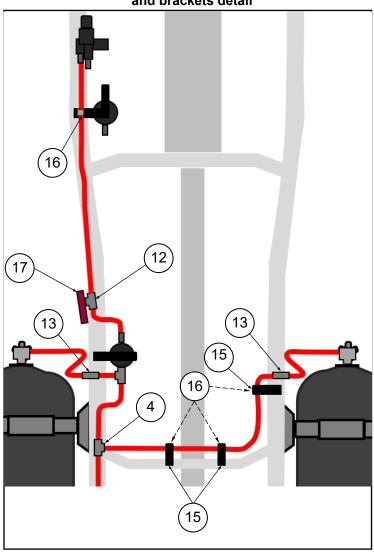


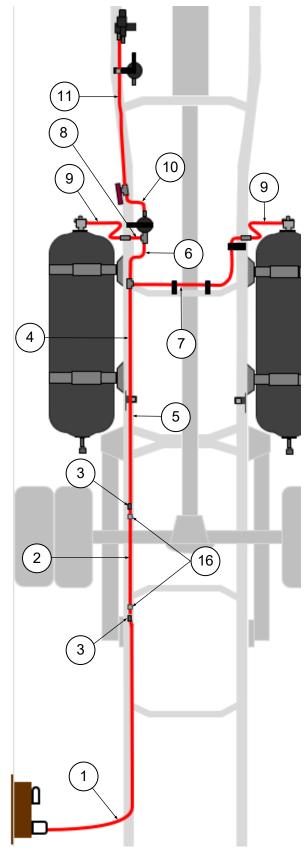


### **HP Fuel Lines**



#### HP Fuel Lines - fittings and brackets detail



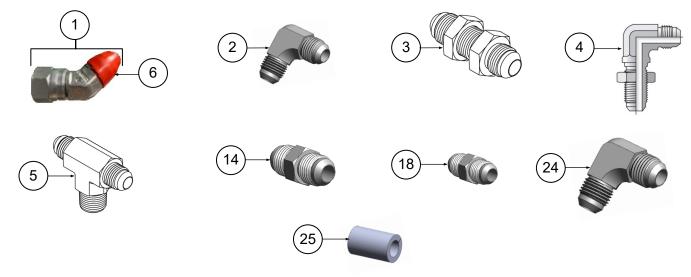




## PRD Vent Lines - tubes & fittings

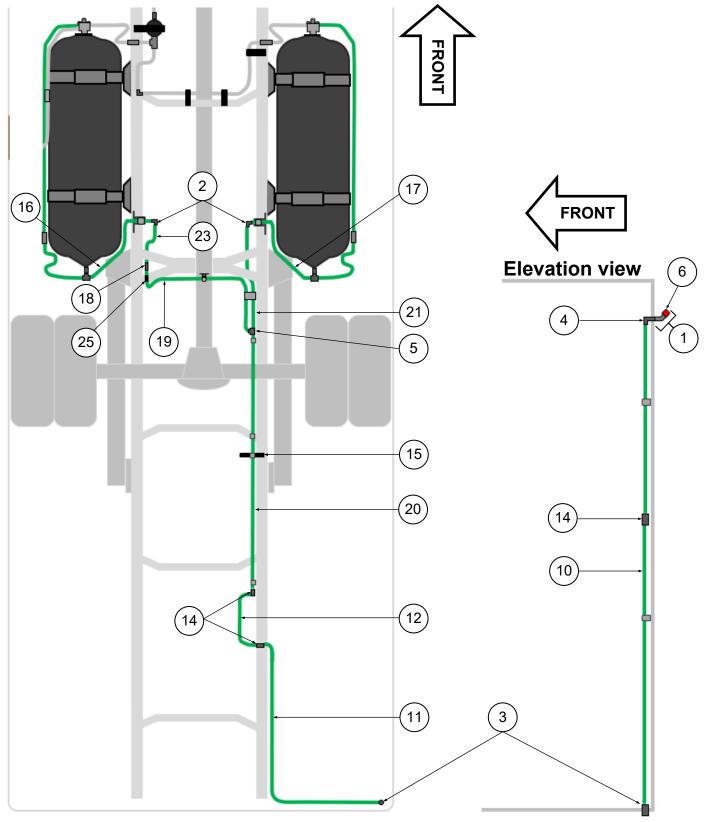
Item	UPS p/n Service	Description		nassis QTY
1	631200	ASM, fitting, 45-degree elbow, PRD vent outlet with	heat shrink cap (6)	1
2	102100	Fitting, JIC, 90-degree elbow		4
3	102000	Fitting, 1/2-in., bulkhead		1
4	611800	Fitting, bulkhead, 90-degree elbow, 1/2-in.		1
5	102002	Fitting, 3/8-in., tee		1
6	107124	Cap, heat shrink, PRD vent outlet		1
9	630600	ASM, tube, PRD vent, body, 1/2-in., union to bulkhea	ad, interior	1
10	630600	ASM, tube, PRD vent, body, 1/2-in., bulkhead to unio	on, interior	1
11	630600	ASM, tube, PRD vent, body, 1/2-in., bulkhead to bulk	khead, exterior	1
12	630600	ASM, tube, PRD vent, body, 1/2-in., union to bulkhea	ad, exterior	1
14	102005	Fitting, 1/2-in., union, straight		3
16	630600	ASM, tube, PRD vent, chassis, 3/8-in., PRD to union	(DS), 168-in. WB	1
17	630600	ASM, tube, PRD vent, chassis, 3/8-in., PRD to union	(PS), 168-in. WB	1
18	102400	Fitting, JIC, Straight, -6 Male JIC, -6 Male JIC		1
19	630600	ASM, tube, PRD vent, chassis, 3/8-in., union to tee (	PS), 168-in WB	1
20	630600	ASM, tube, PRD vent, chassis, 3/8-in., union to tee (	DS), 168-in. WB	1
21	630600	ASM, tube, PRD vent, chassis, 3/8-in., union to tee (	PS), 168-in WB	1
22	630600	ASM, tube, PRD vent, chassis, 1/2-in., tee to union		1
23	630600	ASM, tube, PRD vent, chassis, 3/8-in., elbow to unio	n (DS), 168-in. WB	1
24	611800	Fitting, 1/2-in., 90-degree elbow		1
25	690004	Bushing, tube - SET OF 3 [NOTE: Bushing slips onto (1	9) where it is supported by OEM clamp]	3

\*Not shown





## PRD Vent Lines - tubes & fittings

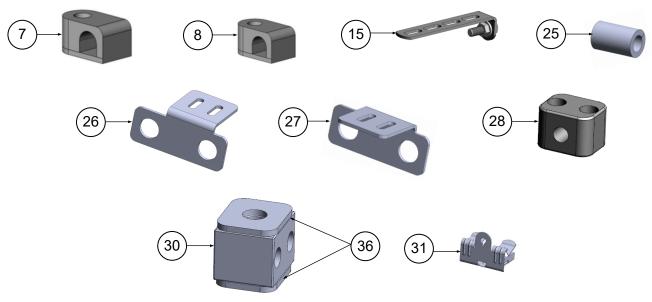




# PRD Vent Lines - brackets, clamps, clips & fasteners

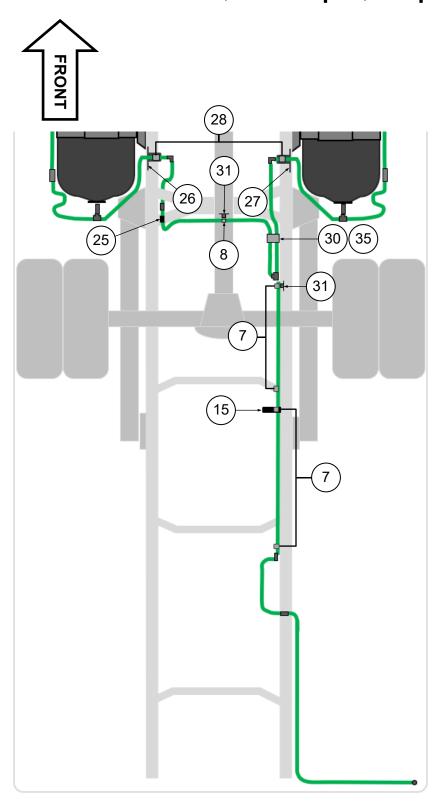
Item	UPS p/n	Service p/n	Description	Chassis QTY
7		69000425	Clamp, tube, 1/2-in SET OF 5	7
8		69000427	Clamp, tube, 3/8-in, single hole SET OF 4	4
15		69000510	ASM, bracket, 4-slot, with hardware [NOTE: Used with (7); one clamp required]	4
25		69000428	Bushing, tube - SET OF 3 [NOTE: Bushing slips onto (19) where it is supported by OEM clamp]	3
26		62080040	Bracket, tube support, DS	1
27		62080041	Bracket, tube support, PS	1
28		10701506	Tube clamp, kit, 3/8-in., double mounting hole	2
29*		61090115	Nut, metric [NOTE: Used with (26) and (27); two required per side]	4
30		61090114	Clamp, twin tube, 3/8-in. tubing	1
31		61090095	Flange clip, zip tie mount [NOTE: Used with (7) and (8)]	1
32*		10760200-1,75	Hex cap screw, 1/4-20 x 1.75-in. [NOTE: Used with (7)]	3
33*		10760100	Washer, 1/4-in.	4
34*		10761300	Flange top lock nut, 1/4-in.	4
35*		10760200-1,5	Hex cap screw, 1/4-20 x 1.5-in. [NOTE: Used with (7) on inside of body]	3
36		20104162	Plate, tube clamp, twin, 1/4-in.or 3/8-in. tubing, single mounting hole	2
37*		10760200-1,25	Hex cap screw, 1/4-20 x 1.25-in. [NOTE: Used with (7)]	1
38*		10760200-1	Hex cap screw, 1/4-20 x 1-in. [NOTE: Used with 8)]	1

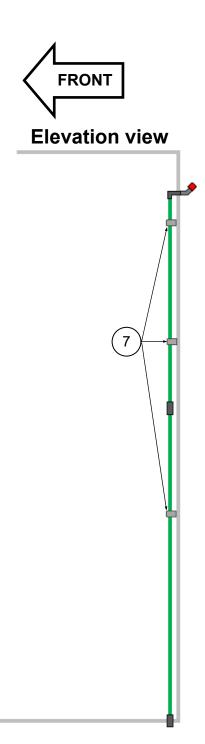
\*Not shown





# PRD Vent Lines - brackets, clamps, clips & fasteners



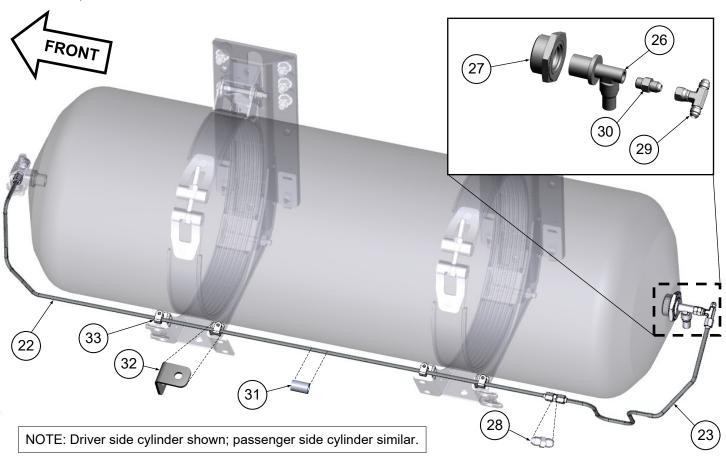




### PRDs & PRD Vent Lines - cylinder mounted

Item	UPS p/n	Service p/n	Description	Chassis QTY
22		21617007	ASM, PRD vent tube, 3/8-in., valve to union, DS	1
23		21617009	ASM, PRD vent tube, 3/8-in., union to PRD, DS	1
24*		21617006	ASM, PRD vent tube, 3/8-in., valve to union, PS	1
25*		21617008	ASM, PRD vent tube, 3/8-in., union to PRD, PS	1
26	4819419	10300077	T-PRD	2
27		16065-97	PRD plug	2
28		10240068	Fitting, union, male to male	2
29		10240697	Fitting, tee, male, male, female	2
30		10240004	Fitting, union, 1/2-20 Male SAE ORB to -6 Male JIC	2
31		69000428	Bushing, tube - SET OF 3	3
32		69000507	Bracket, tube clamp, (black), with hardware	8
33		69000506	Tube clamp, 3/8 in., cylinder PRD vent tube, with hardware - SET OF 4	8

<sup>\*</sup>Not illustrated; similar to DS.



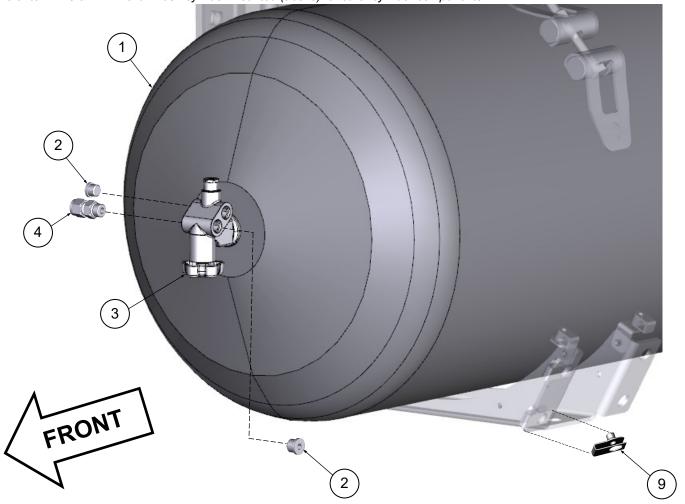


# Cylinder & Shield Components\*\*

Item	UPS p/n	Service p/n	Description	Chassis QTY
1		240101-048A	Cylinder, CNG, 18-in. x 60-in., 20 year life	2
2		10200283	Plug, manual shutoff valve	4
3	4820709	10300102	Manual shutoff valve, cylinder	2
4	4820658	10200062	Fitting, SAE, connector	2
5*		61090105	Washer, flat, cylinder shield mounting	32
6*		10761507	Lock washer, cylinder shield mounting	32
7*		10760202-1,75	Hex cap screw, cylinder shield mounting, inside	16
8*		10760202-1,25	Hex cap screw, cylinder shield mounting, outside	8
9		69000508	Nut clip, cylinder shield mounting - SET OF 4	12

<sup>\*</sup>Not illustrated

<sup>\*\*</sup>Refer to PRDs & PRD Vent Lines - cylinder mounted (above) for other cylinder components.

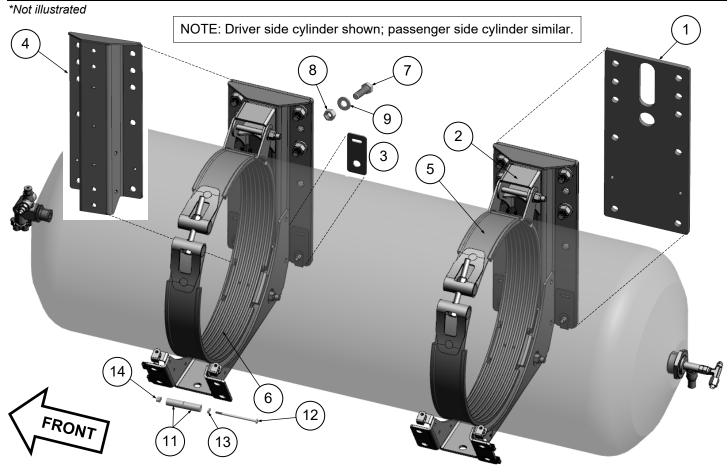


NOTE: Driver side cylinder shown; passenger side cylinder similar.



# Cylinder Mounting Components

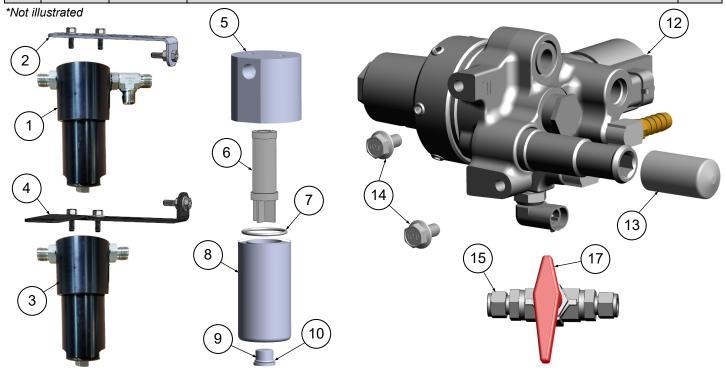
Item	UPS p/n	Service p/n	Description	Chassis QTY
1		21617102	Plate, stiffener, cylinder bracket mount	4
2		69000488	ASM, bracket, cylinder mounting	4
3		21617103	Plate, nut clip (black)	8
4		21615100	Subassembly, welded adaptor bracket	4
5		69000489	ASM, strap, cylinder mounting	4
6		69000490	Kit, isolator, cylinder mounting - SET OF 2	4
7		10760206-2	Hex cap screw, cylinder bracket mounting	16
8		10761660	Lock nut, cylinder bracket mounting	16
9		10710005	Flat washer, cylinder bracket mounting	32
10*		61090109	Flanged hex cap screw, M12-1.75 X 60mm	2
11		61900117	Spacer (NOTE: two required per cylinder mount)	8
12		10760200-4,75	Hex cap screw, cylinder bracket spacer	4
13		10761000	Flat washer, cylinder bracket spacer	4
14		10761300	Flange top lock nut, cylinder bracket spacer	4





# Flow & Filtration Components

Item	UPS p/n	Service p/n	Description	Chassis QTY
1		63110000	ASM, HP fuel filter - includes fittings, element and O-rings	1
2		69000433	Kit, Service, HP fuel filter mounting - includes bracket and hardware	1
3		63110001	ASM, LP fuel filter - includes fittings, element and O-rings	1
4		69000434	Kit, Service, LP fuel filter mounting - includes bracket and hardware	1
5	NS	NS	Filter head - (POA 1 and 3)	2
6		61190003	Filter element, CNG, F-59	2
7	NS	NS	O-ring, filter bowl (POA 1 and 3) [Note: also included in (11).]	2
8	NS	NS	Filter bowl (POA 1 and 3)	2
9		69000430	Filter bowl plug - includes 10	2
10	NS	NS	O-ring, filter plug (POA 9) [Note: also included in (11).]	2
11*		69000481	Kit, Service, filter element - includes (6), (7), (10) and O-ring lube	2
12		63110002	ASM, pressure regulator - includes compression fittings (not shown) and cap (13)	1
13		61090107	Cap, pressure regulator PRD cover	1
14		69000429	Bolt, pressure regulator mounting - SET OF 2	2
15	4820721	10300158	Valve, 1/4-turn manual shutoff, includes (16)	1
17	4823484	10300160	Valve handle, red	1



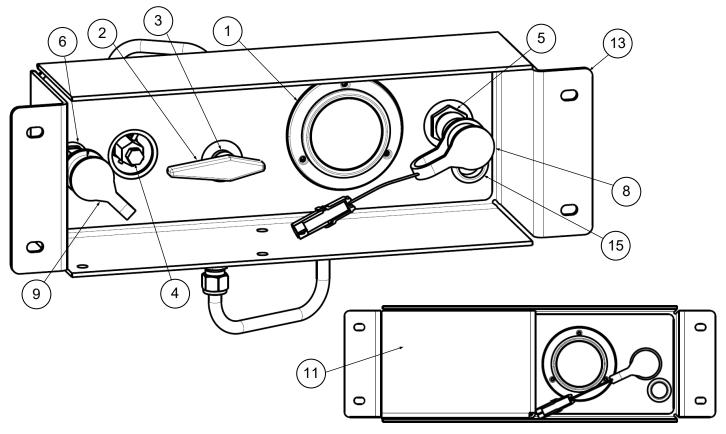
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# Fuel Fill Panel Components - front

Item	UPS p/n	Service p/n	Description	Chassis QTY
1	4819374	10302000	Gauge, HP fuel	1
2	4820721	10300158	Defuel valve, includes red handle	1
3		20100123	Spacer, defuel valve	1
4		10300172	Bleed valve	1
5	4819410	10300712	Receptacle, fuel fill	1
6	4820736	10300212	Receptacle, defuel	1
7*	NS	NS	O-ring, fuel fill receptacle - POA 17	1
8	4819371	10404006	Kill cap, Drive Away Protection (DAP)	1
9		10300213	Dust cap, defuel receptacle	1
10*	NS	NS	O-ring, defuel receptacle - POA 17	1
11		20003301	Panel, fuel fill panel block off	1
12*		69000431	Bolt, fuel fill panel block off panel - SET OF 2	2
13		20003300	Cover, fuel fill panel, mounting face	1
14*		69500006*	U-nut spring clip - SET OF 5 (NOTE: Used to secure fuel fill panel block off panel)	3
15		10702936	Grommet, fuel fill panel	1
16*		20003006	ASM, fuel fill panel, complete	1
17*	4822716	10500059	Kit, service, O-ring assortment	n/a

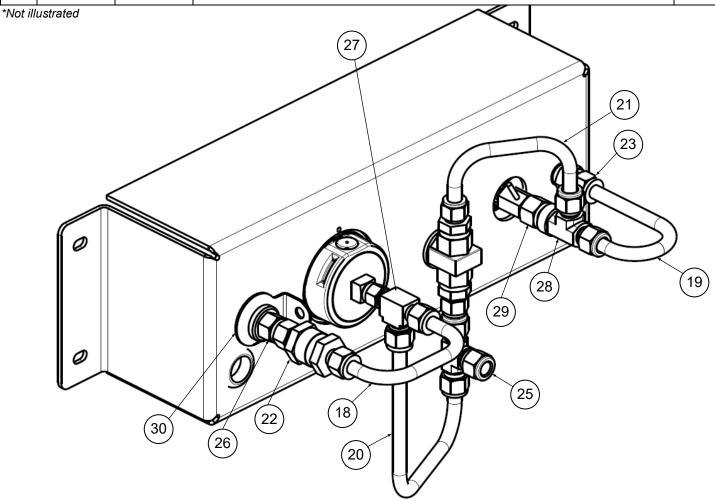
<sup>\*</sup>Not illustrated





# Fuel Fill Panel Components - rear

Item	UPS p/n	Service p/n	Description	Chassis QTY
18		69000482	ASM, HP fuel tube, fill panel, check valve to tee	1
19		69000483	ASM, HP fuel tube, fill panel, tee to valve	1
20		69000484	ASM, HP fuel tube, fill panel, tee to tee	1
21		69000485	ASM, HP fuel tube, fill panel, tee to defuel valve	1
22		10300323	Check valve, 3/8-in.	1
23		10200050	Fitting, bulkhead, straight. 3/8-in.	1
24*		10200142	Fitting, port connector	1
25		10200207	Fitting, tee, 3/8-in. to 3/8-in	1
26	4820682	10200236	Fitting, adapter, male	1
27		10200264	Fitting, tee, 3/8-in. to 1/4-in.	1
28		10200270	Fitting, tee, 3/8-in. to 1/4-in. female	1
29		10240403	Fitting, adapter, straight	1
30		20104137	Bracket, grounding wire	1

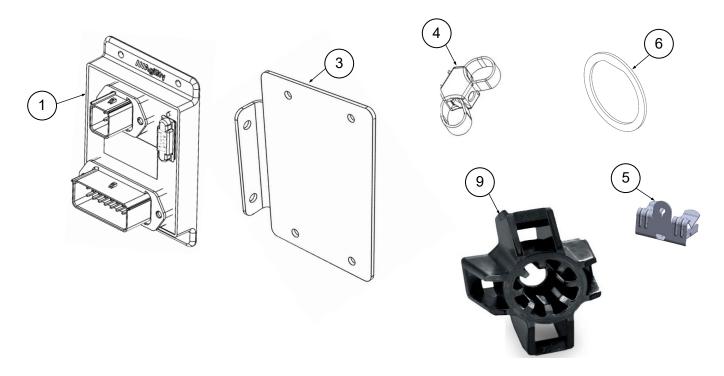




# **Electrical Components**

Item	UPS p/n	Service p/n	Description	Chassis QTY
1		20102905	ECU, Ford CNG, PTS_FORD_03.GAU, FW 5.0	1
2*		69000487	Kit, ECU mounting hardware	1
3		69000486	Kit, Service, Ford F-59 ECU bracket mounting - includes bracket and hardware	
4		69000422	Clip, dual tie strap - SET OF 13	
5		61090095	Flange clip, zip tie mount	2
6		62160001	Gasket, engine compartment bulkhead harness connector	1
7*		61040012	Harness, chassis, Ford F-59	1
8*		61040013	Harness, cabin, Ford F-59	1
9		61090110	Mount, 5/8-in. stud, 4-way tie down	2

<sup>\*</sup>Not shown



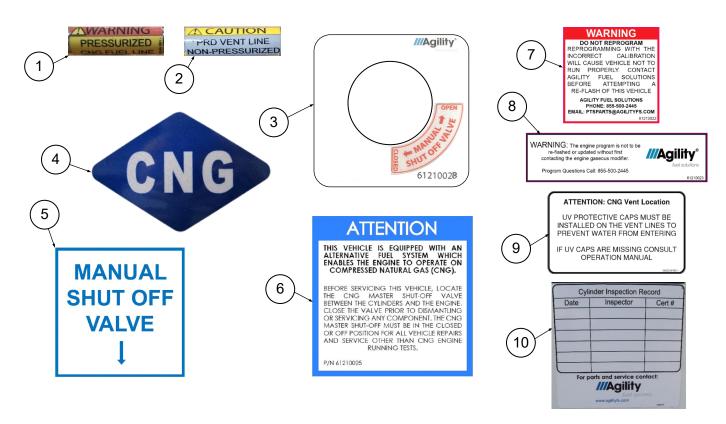


#### **Decals & Labels**

Item	UPS p/n	Service p/n	Description	Chassis QTY	Location
1	4824783	10602484	Decal, WARNING Pressurized CNG Fuel Line	†	Fuel lines
2		10602442	Decal, PRD Vent Line, CAUTION	†	PRD vent lines
3		10602310	Decal, Manual Shut Off Valve	1	DS chassis rail
4	3467644	10602105	Decal, CNG blue diamond	3	Body sides and rear††
5		61210024	Decal, Manual Shut Off Valve, 2.5x2.5	1	DS body
6		61210025	Decal, ATTENTION, Master Shut-Off Valve, CNG, 3x3	1	Engine compartment firewall
7		61210022	Decal, Reprogram Warning, 2x2	1	Engine compartment firewall
8		61210023	Decal, Reprogram Warning, 1x4	1	Adjacent to OBD-II port
9		10602610	Decal, WARNING PRD Vent Location	1	Body, adjacent to PRD vent tube outlet
10		10602107	Decal, Cylinder Inspection Record	2	Cylinders; visible inside shield
11*		10602108	Decal, Fuel fill panel, Danger Vent Pressure	1	Fuel fill panel
12*		10602234	Decal, System, WARNING, PRD Inspection	1	Fuel fill panel
13*		10602614	Decal, Faceplate, fuel fill panel	1	Fuel fill panel

<sup>†</sup>Decal shall be installed every 18-in. to 24-in.

††Decal cannot be installed on rear bumper per U.S. DOT mandate. Side decals must be installed adjacent to DOT number.





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