

# Ford F-59 CNG UPS Service Parts Catalog 2019 P80 - Job # 20-26



SPC.0001 October 20, 2020



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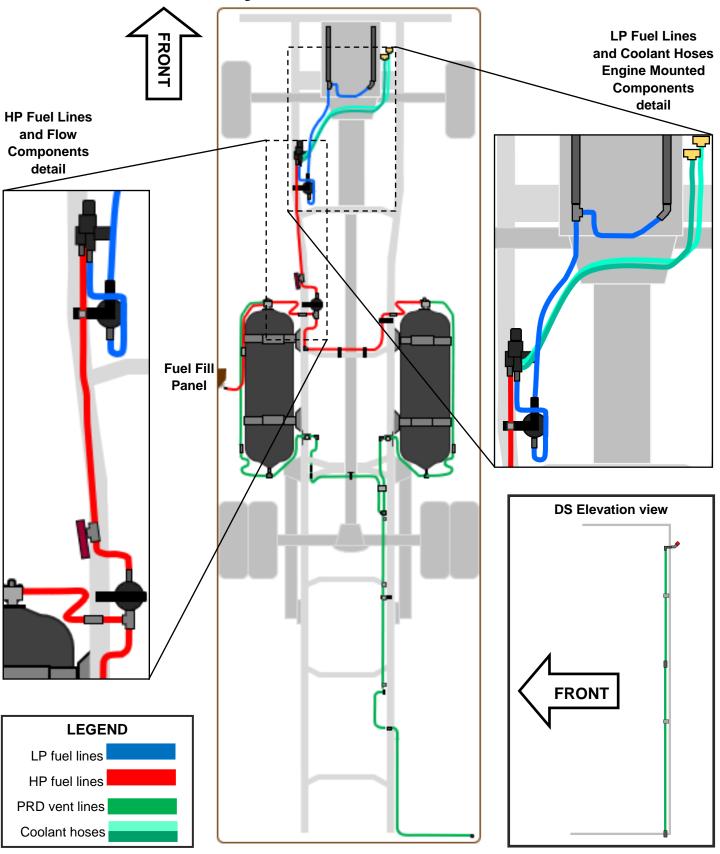


#### **Abbreviations Used**

Item	Description
ASM	Assembly
CNG	Compressed natural gas
DS	Driver side
HP	High-pressure
LP	Low-pressure
MY	Model year
NPT	National pipe taper; full name: American National Standard Taper Pipe Thread
NS	Not serviced
POA	Part of assembly
PRD	Pressure relief device
PS	Passenger side
SS	Stainless steel
T-PRD	Thermal PRD
WB	Wheelbase



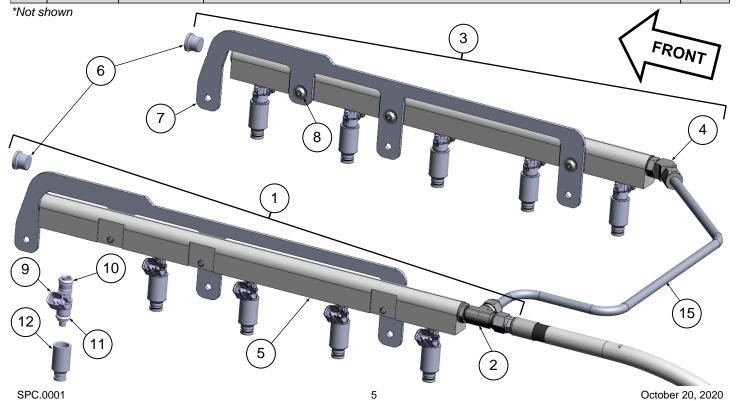
# Fuel System Schematic





# **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		10200283	Fitting, straight plug, fuel rail, 6.8L, CNG	2
7		62080038	Bracket, single piece, fuel rail, 6.8L, CNG	2
8		69000541	Screw, fuel rail to fuel rail bracket mounting, 6.8L CNG - SET OF 6	6
9		61020015	Fuel injector, 6.8L, CNG [NOTE: requires QTY: 1 O-ring from (10)]	10
10		69000420	O-ring, fuel injector, upper, black, 6.8L, CNG – 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*		69000419	Bolt, fuel rail bracket to intake manifold mounting - SET OF 6	6





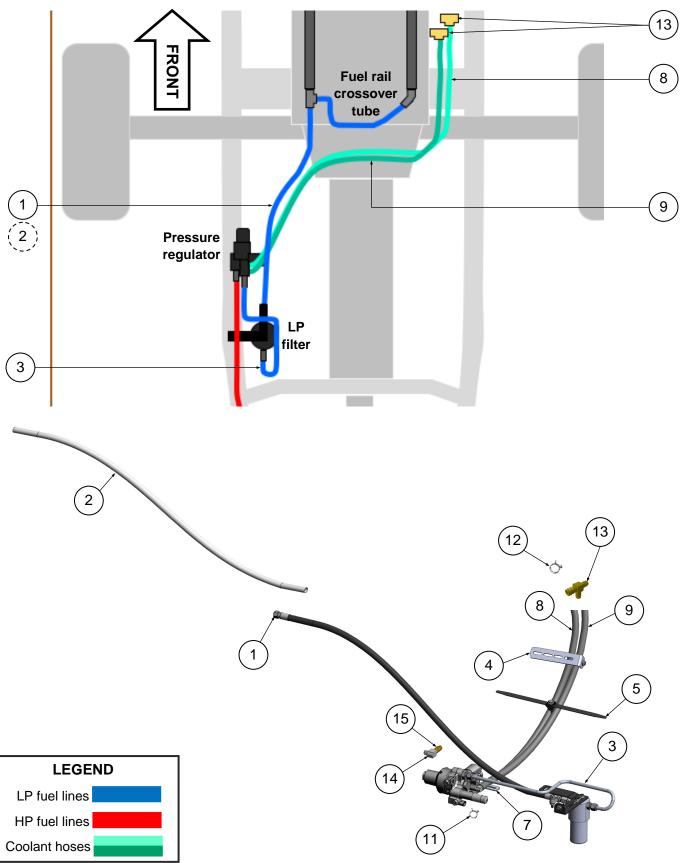
#### LP Fuel Lines & Coolant Hoses

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
15		61180047	Fitting, straight barb	2
16*		10760200-1,5	Hex cap screw, 1/4-20 x 1.5 in [NOTE: use QTY: 1 with (5)]	n/a
17*		10761300	Flange top lock nut, 1/4 in [NOTE: use QTY: 1 with (5)]	n/a
18*		10761000	Flat washer, 1/4 in [NOTE: use QTY: 2 with (5)]	n/a

\*Not illustrated



#### LP Fuel Line & Coolant Hose Schematic

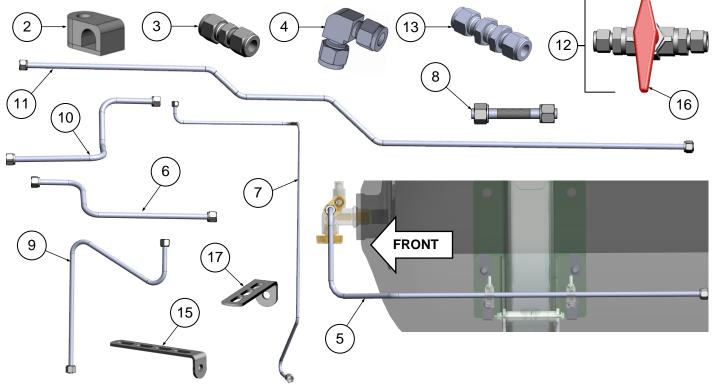




#### **HP Fuel Lines**

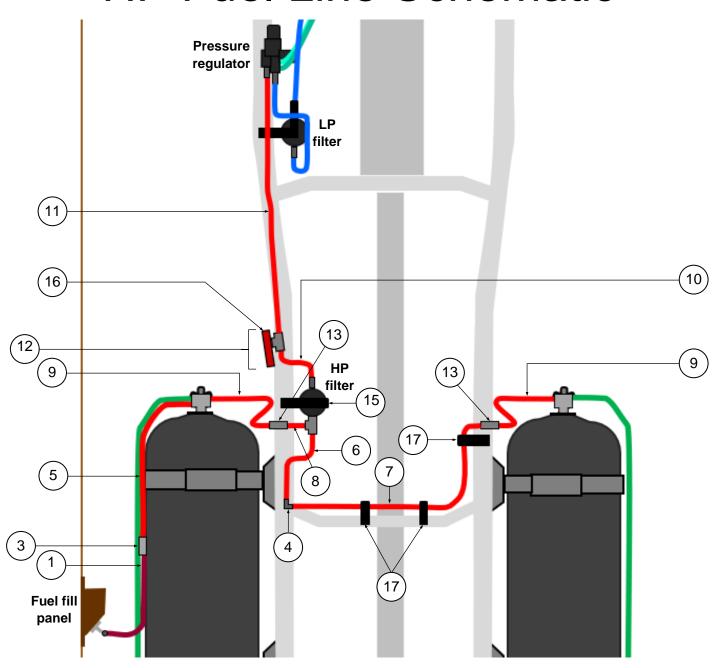
Item	UPS p/n	Service p/n	Description	Chassis QTY
1		61170046	Hose, HP flexible fuel	1
2		69000427	Clamp, tube, 3/8 in - SET OF 4	4
3		10200002	Fitting, union, 3/8 in	1
4		10200155	Fitting, elbow, 3/8 in	1
5		63060023	ASM, tube, HP fuel, flex hose to shutoff, 168 in WB, MY19	1
6		63060003	ASM, HP fuel 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 (16)]	1
13		10200023	Fitting, straight, bulkhead, 3/8 in, HP fuel line	2
14*		10761009	Flat Washer, 1/2 in [NOTE: use QTY: 2 with (13)]	4
15		62080033	Bracket, 4-slot, 1/4 in mounting hole	1
16	4823484	10300160	Valve handle, red	1
17	_	20103228	Bracket, 3-slot x 3/8 in hole, 90-degrees	3

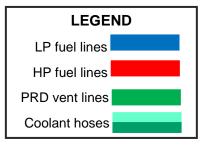
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#### **HP Fuel Line Schematic**

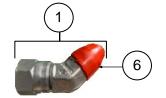




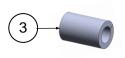


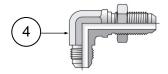
# PRD Vent Lines - tubes & fittings

Item	UPS p/n	Service p/n	Description	Chassis QTY
1		63120000	ASM, fitting, 45-degree elbow, PRD vent outlet with heat shrink cap (6)	1
2		10210066	Fitting, JIC, 90-degree elbow, -6 male JIC, -6 male JIC	2
3		69000428	Bushing, tube - SET OF 3 [NOTE: bushing slips onto (19) where it is supported by OEM clamp]	1
4		10200518	Fitting, bulkhead, 90-degree elbow, -8 male JIC, -8 male JIC	3
5		10200285	Fitting, 1/2 in Tube O.D., 3/8 in Tube O.D., 3/8 in Tube O.D.	1
6		NS	Cap, heat shrink, PRD vent outlet (POA 1) [NOTE: if cap is missing, (1) must be ordered]	1
9		63060022	ASM, tube, PRD vent, body, 1/2 in, union to bulkhead (interior)	1
10		63060042	ASM, tube, PRD vent, body, 1/2 in, elbow to union (interior)	1
11		63060043	ASM, tube, PRD vent, body, 1/2 in, bulkhead to elbow (exterior)	1
12		63060019	ASM, tube, PRD vent, body, 1/2 in, union to bulkhead (exterior)	1
14		10200518	Fitting, 1/2 in, union, straight, 1/2 in JIC, 1/2 in JIC	1
16		63060011	ASM, tube, PRD vent, chassis, 3/8 in, PRD to union (DS), 168 in WB	1
17		63060013	ASM, tube, PRD vent, chassis, 3/8 in, PRD to union (PS), 168 in WB	1
18		10240068	Fitting, JIC, straight, -6 male JIC, -6 male JIC	1
19		63060014	ASM, tube, PRD vent, chassis, 3/8 in, union to tee (PS), 168 in WB	1
20	<u> </u>	10240226	Fitting, 1/2 in, 90-degree elbow, -8 male JIC, -8 male JIC	
21		63060018	ASM, tube, PRD vent, chassis, 3/8 in, union to tee (PS), 168 in WB	1
22		63060015	ASM, tube, PRD vent, chassis, 1/2 in, tee to union	1
23		63060017	ASM, tube, PRD vent, chassis, 3/8 in, elbow to union (DS), 168 in WB	1











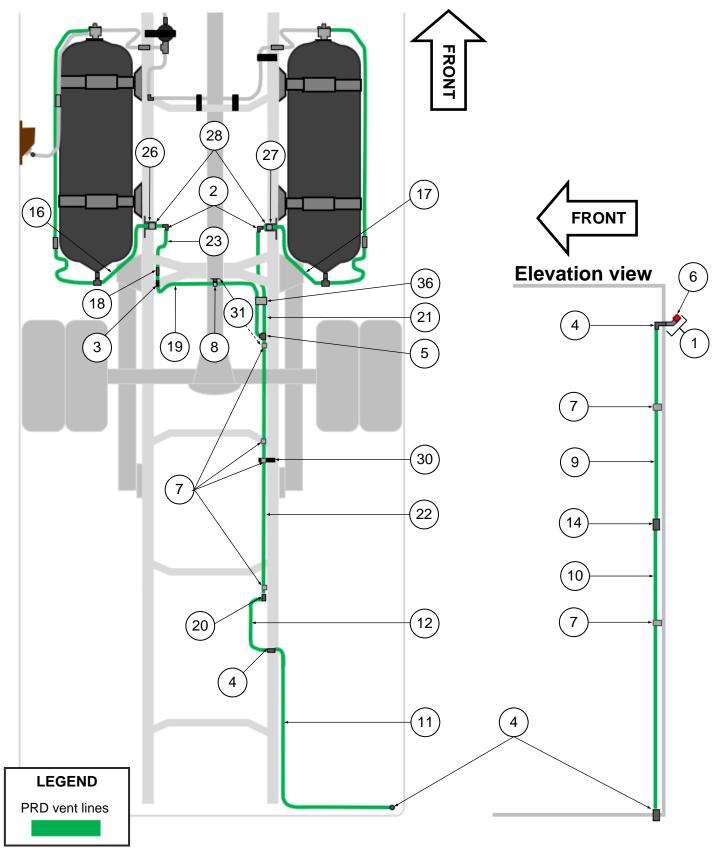








#### **PRD Vent Line Schematic**

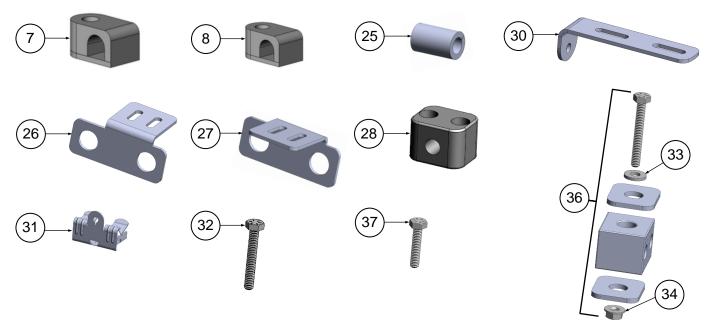




# PRD Vent Lines - brackets, clamps, clips & fasteners

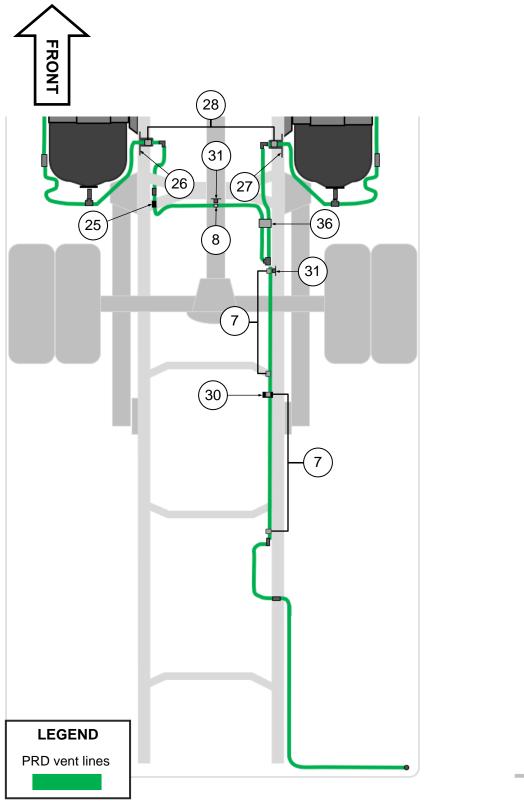
Item	UPS p/n	Service p/n	Description	Chassis QTY
7		69000425	Clamp, tube, 1/2 in - SET OF 5	7
8		69000427	Clamp, tube, 3/8 in, single hole - SET OF 4	4
25		69000428	Bushing, tube - SET OF 3 [NOTE: Bushing slips onto (19) where it is supported by OEM clamp]	1
26		62080040	Bracket, tube support, DS	1
27		62080041	Bracket, tube support, PS	1
28		10701506	Tube clamp, kit, 3/8 in, double mounting hole [NOTE: includes top plate (not shown)]	2
29*		61090115	Metric hex nut, M18 x 2.5 mm [NOTE: used with (26) & (27); QTY: 2 required per side]	4
30		20103227	Bracket, 2-slot x 3/8 in hole, 90-degrees [NOTE: used with QTY: 1 (7)]	1
31		61090095	Flange clip, zip tie mount [NOTE: used with (7) and (8)]	1
32		10760200-1,25	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		61090114	Kit, service, clamp, twin tube, 1/4 in or 3/8 in tubing, with plates and hardware	1
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

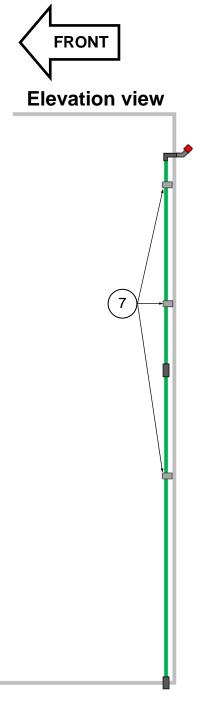
\*Not shown





# PRD Vent Line Schematic - brackets, clamps, clips & fastener locations



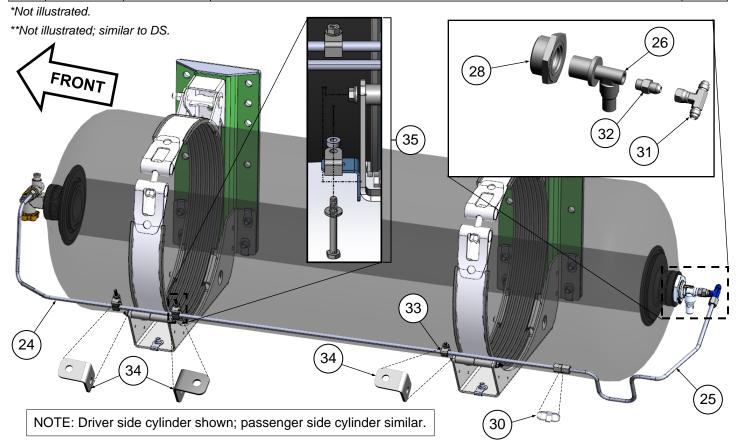


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#### PRDs & PRD Vent Lines - cylinder mounted

Item	UPS p/n	Service p/n	Description	Chassis QTY
22**		21619007	ASM, PRD vent tube, 3/8 in, valve to union, PS	1
23**		21619009	ASM, PRD vent tube, 3/8 in, union to PRD, PS	1
24		21619006	ASM, PRD vent tube, 3/8 in, valve to union, DS	1
25		21619008	ASM, PRD vent tube, 3/8 in, union to PRD, DS	1
26	4819419	10300077	T-PRD - includes (27)	2
27*		10500021	O-ring, T-PRD (POA 26)	2
28		240321-97	PRD adapter [NOTE: Requires (29)]	2
29*		240318-226	O-ring, PRD adapter	2
30		10240068	Fitting, union, male to male	2
31		10240697	Fitting, tee, male, male, female	2
32		10240004	Fitting, union, 1/2-20 Male SAE ORB to -6 Male JIC	2
33		69000506	Tube clamp, 3/8 in, cylinder PRD vent tube, with hardware - SET OF 4	7
34		69000507	Bracket, tube clamp, with hardware	5
35		69000542	Kit, 3/8 in tube clamps with spacer and hardware	2



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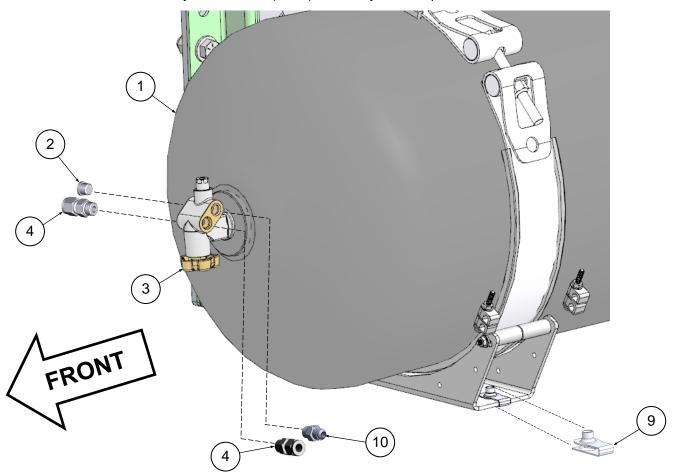


# Cylinder & Shield Components\*\*

Item	UPS p/n	Service p/n	Description	Chassis QTY
1		240101-248A	Cylinder, CNG, 18-in x 60-in, 20 year life	2
2		10200283	Plug, manual shutoff valve	3
3	4820709	10300102	Manual shutoff valve, cylinder	2
4	4820658	10200062	Fitting, SAE, connector	3
5*		61090105	Washer, flat, cylinder shield mounting	16
6*		10761507	Lock washer, cylinder shield mounting	16
7*		10760202-1,75	Hex cap screw, cylinder shield mounting, inside	8
8*		10760202-1,25	Hex cap screw, cylinder shield mounting, outside	8
9		69000508	Nut clip, cylinder shield mounting - SET OF 4	20
10		10240105	Fitting, JIC, Straight, -6 Male JIC, 9/16-18 Male SAE, SS (QTY	2

<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.



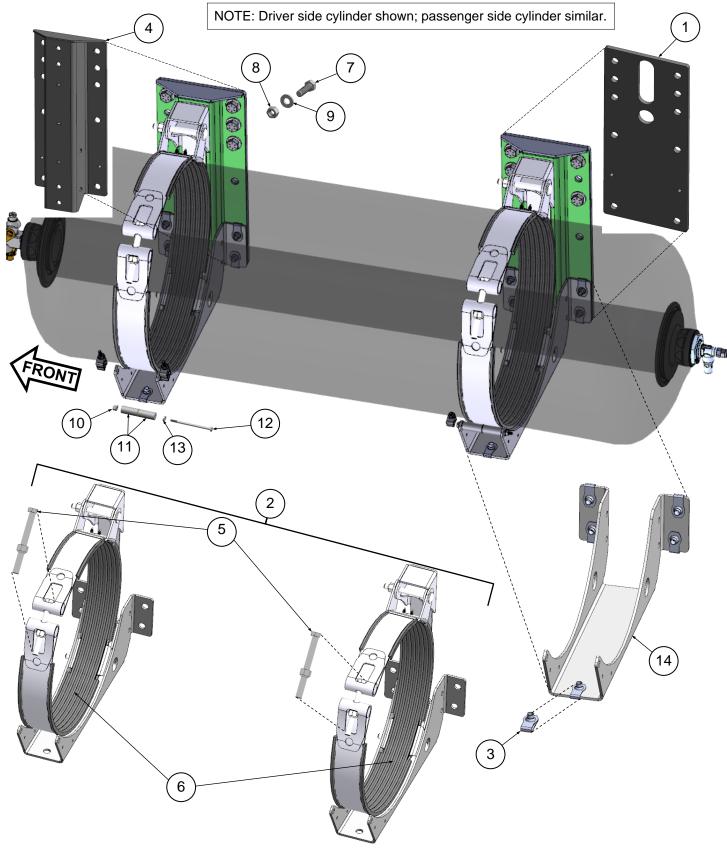
# Cylinder Mounting Components

Item	UPS p/n	Service p/n	Description	Chassis QTY
1		62080050	Plate, stiffener, cylinder bracket mount	4
2		240085-25	Kit, bracket, cylinder mounting, pair [NOTE: Brackets must be supplied in pairs.]	4
3		69000508	Nut clip, cylinder shield mounting - SET OF 4	20
4		62080052	Subassembly, welded adapter bracket	4
5		NS	Hardware, strap tightening (POA 6)	4
6		69000540	Kit, isolator, cylinder mounting - includes strap tightening hardware (5) - SET OF 2 [NOTE: Isolators must be replaced in pairs]	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		10761300	Flange top lock nut, cylinder bracket spacer	4
11		61090117	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		62080043	Bracket, cylinder shield mounting	4

<sup>\*</sup>Not illustrated



# Cylinder Mounting Components





# Flow & Filtration Components

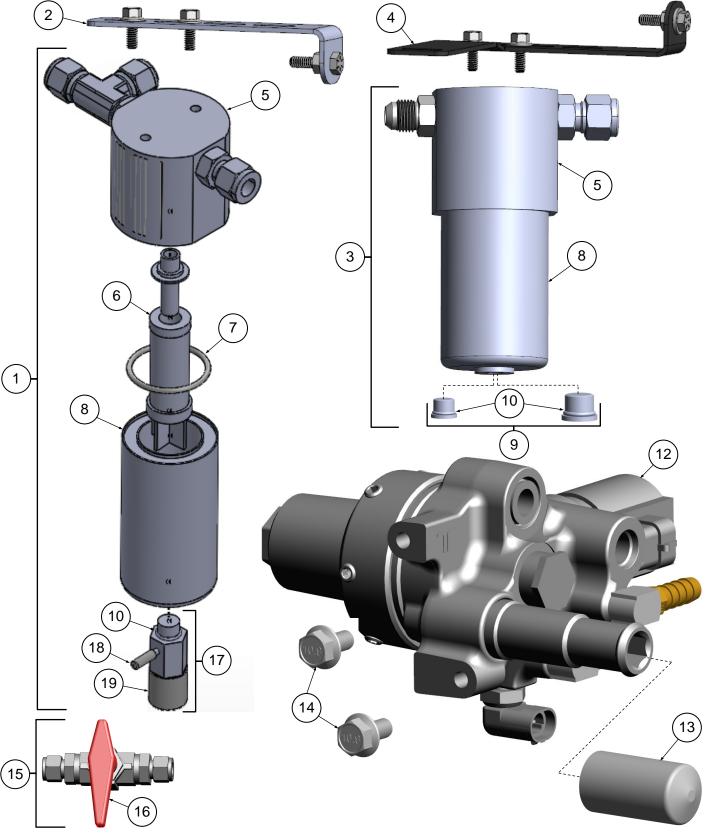
Item	UPS p/n	Service p/n	Description	ASM QTY
1		63110019	ASM, HP fuel filter - includes fittings, bleed valve, element, and O-rings	1
2		69000433	Kit, Service, HP fuel filter mounting - includes bracket and hardware	1
3		63110020	ASM, LP fuel filter - includes fittings, plug, element, and O-rings	1
4		69000434	Kit, Service, LP fuel filter mounting - includes bracket and hardware	1
5	NS	NS	Filter head - (POA 1 and 3)	2
6		NS	Filter element, CNG, F-59 (POA 11)	2
7		61160020	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		69000543	Kit, filter bowl plug - includes QTY: 1 -4 plug with (10) and QTY: 1 -6 plug with (10) [NOTE: Used on LP filter only]	1
10	NS	NS	O-ring, LP filter plug (POA 9) [NOTE: also included with ((10), 11), and (17)]	2
11*		69000481	Kit, Service, filter element - includes (6), (7), 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
16	4823484	10300160	Valve handle, red	1
17		69000539	Kit, bleed valve, HP filter - includes (17), (18) and (19)	1
18		61090128	Cap, 1/8 in [NOTE: Must be used with (17)]	1
19		61090129	Cap, 5/8 in-11/16 in I.D. [NOTE: Must be used with (17)]	1

<sup>\*</sup>Not illustrated

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# Flow & Filtration Components

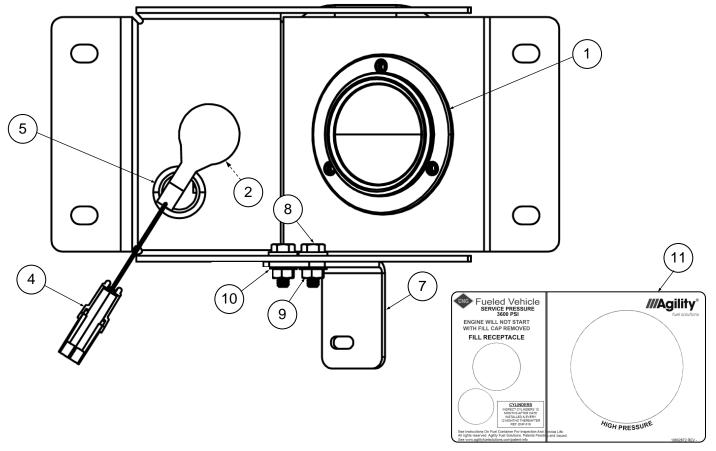




## Fuel Fill Panel Components - front

Item	UPS p/n	Service p/n	Description	ASM QTY
1		24100072	ASM, HP fuel gauge - includes nut and ferrule	1
2	4819410	10300712	Receptacle, fuel fill	1
3*	NS	NS	O-ring, fuel fill receptacle - POA 12 [NOTE: O-ring is included in (6)]	1
4	4819371	10404006	Kill cap, Drive Away Protection (DAP)	1
5		10702936	Grommet, fuel fill panel	1
6*	4822716	10500059	Kit, service, O-ring assortment	n/a
7		62080057	Bracket, FMM box, UPS 2020	1
8		10761300	Flange top lock nut, 1/4-20	2
9		10760200-0075	Hex cap screw, 1/4-20 X 3/4 in	2
10		10761000	Flat washer, 1/4 in	2
11		10602672	Decal, 631, Fill Panel	1
12*		63110009	ASM, fuel fill panel, complete Includes (1), (2), (3), (4), (5), (7), (8), (9), (10), (11), (14), (15), (16), (17), (18)	1
13*		61090124	Clamp, ratchet [NOTE: Used to secure HP flex hose to (7)]	1

\*Not illustrated

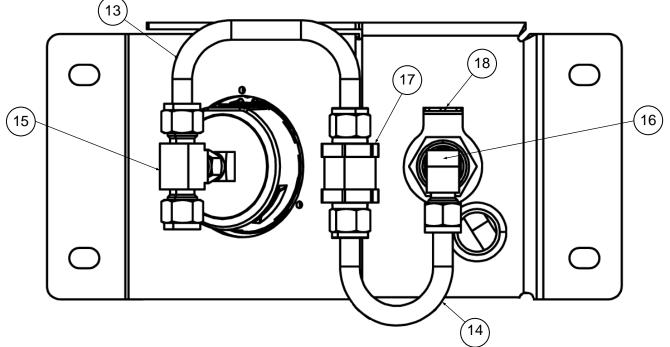




### Fuel Fill Panel Components - rear

Item	UPS p/n	Service p/n	Description	Chassis QTY
13		63060111	ASM, HP fuel tube, fill panel, HP gauge to check valve	1
14		63060112	ASM, HP fuel tube, fill panel, fill receptacle to check valve	1
15		10200213	Fitting, tube, tee, HP gauge	1
16		10200180	Fitting, tube, elbow, fill receptacle	1
17		10300323	Check valve	1
18		20104137	Bracket, grounding wire	1





# **Special Tools**

Item	UPS p/n	Service p/n	Description
1*		69500019	Kit, defueling, CNG, service - includes (2), (3), (4)
2		69500020	Hose, defueling, CNG, service
3*		69500018	Supply solenoid jumper harness, service
4*		69500024	Defueling ground harness, service

<sup>\*</sup>Not illustrated

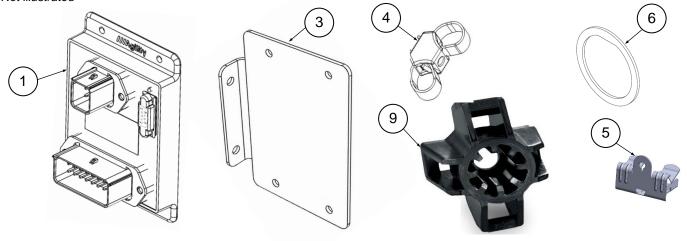




# **Electrical Components**

Item	UPS p/n	Service p/n	Description	Chassis QTY
1	01 3 p/11	20102905	ECU, Ford CNG, PTS_FORD_03.GAU, FW 5.0	1
2*		69000487	Kit, ECU mounting hardware	
3		69000486	Kit, Service, Ford F-59 ECU bracket mounting - includes bracket, hardware, and (2)	
4		69000422	Clip, dual tie strap - SET OF 13	13
5		61090095	Flange clip, zip tie mount	2
6		62160001	Gasket, engine compartment bulkhead harness connector	1
7*		61040014	Harness, chassis, Ford F-59, mid-body FMM	1
8*		61040013	Harness, cabin, Ford F-59	1
9		61090110	Mount, stud, 4-way tie down	2
10*		62280000	Edge guard [NOTE: Used to protect chassis harness as it passes below frame rail to fill panel]	1
11*		61090106	Button head zip tie	2

\*Not illustrated



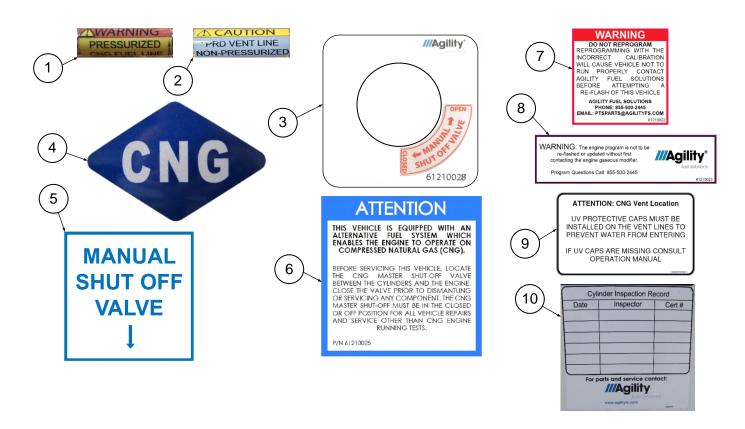


#### **Decals & Labels**

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		61210028	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

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

<sup>††</sup>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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