

**Spec. No. M59-301-01-INBY
M59-591-01-OUTBY**

Flame-Proof Port

MSHA requires the measure of the total restriction of the intake system and the total exhaust gas backpressure of the exhaust system of every inby approved and outby heavy duty diesel engine power package at scheduled intervals. Because these measurements require that pipe plugs be removed from flame-proof components and that probes be inserted into the open ports while the engine is running, these tests must currently be performed at an outby location of the mine. The plugs, located in the engine compartment, must be removed and re-installed for each test. The mechanic must stand next to the machine, with the engine running at high idle, while the test is performed.

A Flame-proof Port Kit has been developed which simplifies the tests, saves time, and provides a safer condition for the mechanic.

A Flame-proof Port is permanently installed in both the total intake restriction and total exhaust backpressure port. The design of the Flame-proof Port meets all MSHA requirements for flame proof components, and has been tested and certified by MSHA as part of flame-proof intake and exhaust systems. Tests can now be conveniently performed at either an inby or outby location of the mine.

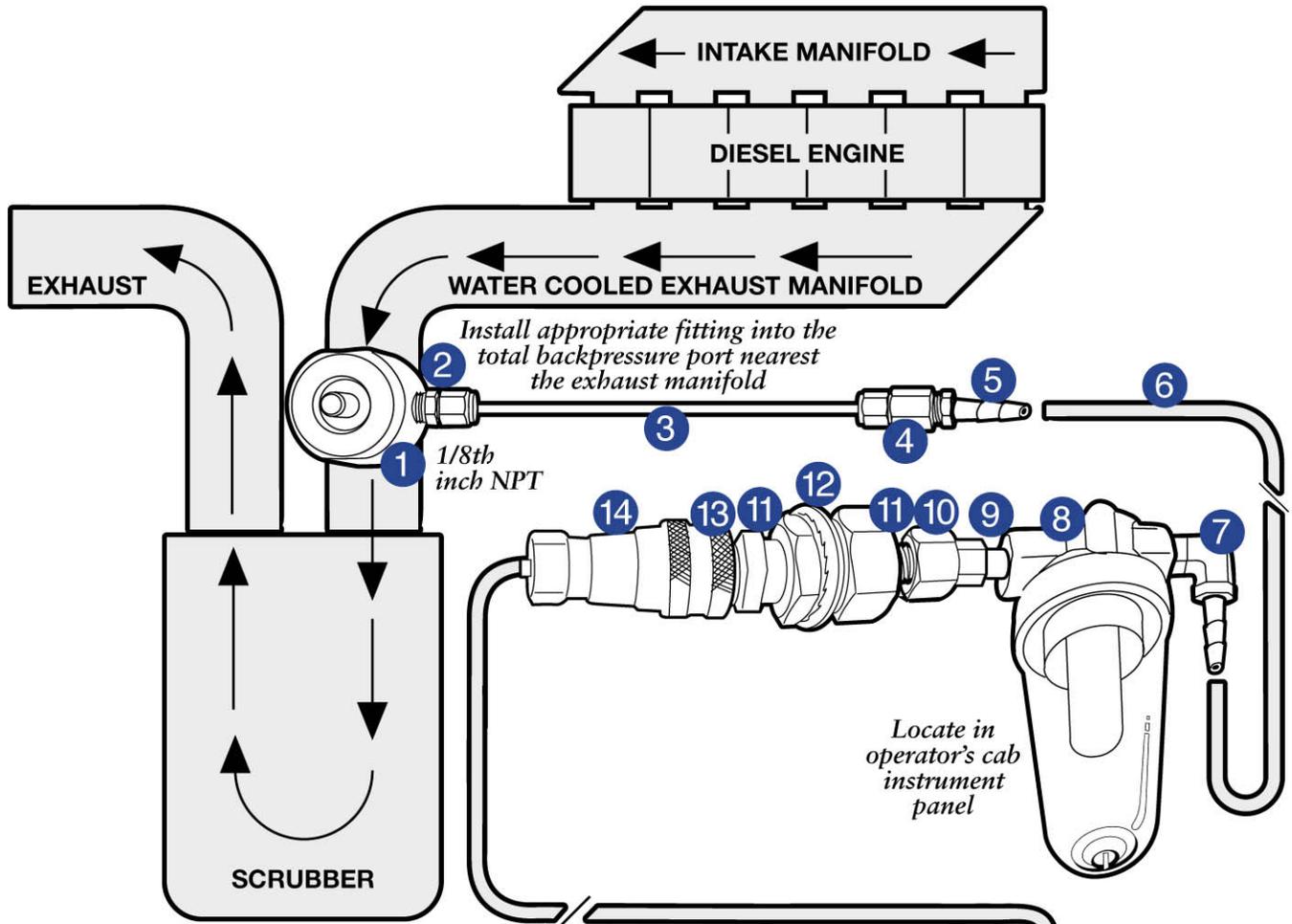
A pipe or hose connection is provided from each Flame-proof Port to the operator's cab, where either a permanently installed gauge or a quick connect gauge may be used to perform the MSHA required measurements. In either case, the mechanic can perform the tests from inside the safe location of the operator's cab.

A requirement of MSHA Part 7 regulations is that untreated, undiluted exhaust gas must be sampled. The sample must be taken while the engine is under full load and the only suitable sampling location is the exhaust backpressure port located in the engine compartment. If fitted with the Flame-proof Port, the required sampling can be performed by adding a condensing tube and a water separator into the line between the Flame-proof Port and the engine compartment and another quick connect port in the operator's cab. A suitable hand held CO monitor is connected to this quick connect port and the sampling is conducted by one mechanic from the safe location of the operator's cab.

For either application, the Flame-proof Port allows the mechanic to perform the required tests quicker and safer, eliminating the need for a second person to operate the engine, and can be performed at any location in the mine.

Schematic Scrubber System
 Shown with Optional Flame Proof Port

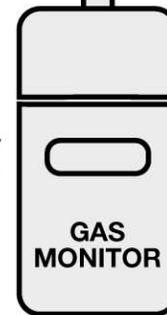
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DST PORT KITS

Item	Part No.	Description	M59-301-01 In-by Kit	M59-591-01 Out-by Kit
1	M40-596-01	Flame Proof Port	▲	
2	5182K807	Male Fitting	●	
3	M59-502-11	Cooling Tube	●	●
4	5182K794	Female Fitting	●	●
5	5346K11	Male Barb	●	●
6	5268K11	High Temperature Hose (Specify Length)	▲	▲
7	44555K147	Barbed Elbow	●	●
8	M59-503-11	Water Separator Filter	●	●
9	50785K151	Nipple	●	●
10	50785K181	Coupling	●	●
11	50785K152	Nipple	●	●
12	M59-504-01	Bulkhead Coupling	●	●
13	M59-505-03	Nipple	●	●
14	M59-505-02	Quick Coupler	●	●
15	M91-596-01	Elbow (not illustrated)		●

Gas sampler with electric pump



Technology for a cleaner environment

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▲ Not included in kit. Must be ordered separately.

We reserve the right to change specifications without notice. 7/15