

LIQUIP MECHANICAL ENGINE STRANGLER

Liquip offers a range of mechanical engine stranglers that can shut down the engine of fuel delivery trucks in an emergency situation such as roll over.

The engine strangler can be pneumatically or manually actuated to stop the engine in case of diesel runaway, and is easily re-set for continued use once activated.

The engine strangler can also be actuated by the rollover sensor via a solenoid valve. This provides a complete system of engine protection and electrical isolation for maximum vehicle safety.

Key Features

- 100% reusable. Once installed, it never needs replacement, no matter how many times it is used to save the vehicle.
- Manual, cable or air operated for added convenience.
- Available in both 3" and 5"



Operation

When the valve is pulled open (by hand) a coil spring is tightened and this energy is held by a trigger catch. The valve is closed by the spring when the trigger is released. This can be achieved in various ways:

- (i) By direct hand – pull. Eg when carrying out routine checks.
- (ii) By remote mechanical actuation. Eg cable or rod.
- (iii) Air actuation via the standard built in air ram. Air ram is normally discharged and a pressure “on” supply closes the valve.

Operating valves can be fitted anywhere in or around the vehicle, using normal vehicle pressure.

Use of air pressure “on” to close the valve and hence stop the engine is viewed as a fail-safe feature. If the valve were to be held open by air pressure, any accidental loss of air in that line would result in engine shutdown. Not a desirable feature.

- (iv) As shown below, the engine strangler can be linked in with the roll over sensor for automatic closure in the case of roll over.

Engine strangler is reset manually.

Specifications

Minimum operating pressure	400 kPa
Maximum operating pressure	900 kPa
Air fittings	2 x 1/8" BSP
Weight	1.8 kg.
Mounting	It is used on the engine air intake hose using hose circlips.
Materials	Body - Aluminium (anodised black) Butterfly - Aluminium (anodised black) Springs - Stainless steel O-rings - Viton Spindle - Stainless steel
Maintenance	It is recommended that the valve operation be checked, using all the methods of actuation which may be fitted to particular vehicle, at normal service intervals.
Dismantle	Remove two (2) hex capscrews and pull out the actuating mechanism together with the operating shaft. Push out butterfly and inspect o-ring. Replace if necessary. Reassemble and test

Ordering Information

MES3: 3" Mechanical Engine Strangler.

MES5: 5" Mechanical Engine Strangler.

MES5MS: Mechanical Engine Strangler Air/Mine Spec (contact Liquip for technical data).

Associated Equipment

RS Series: Liquip Rollover Sensors.

See overleaf for air circuit and parts drawing.

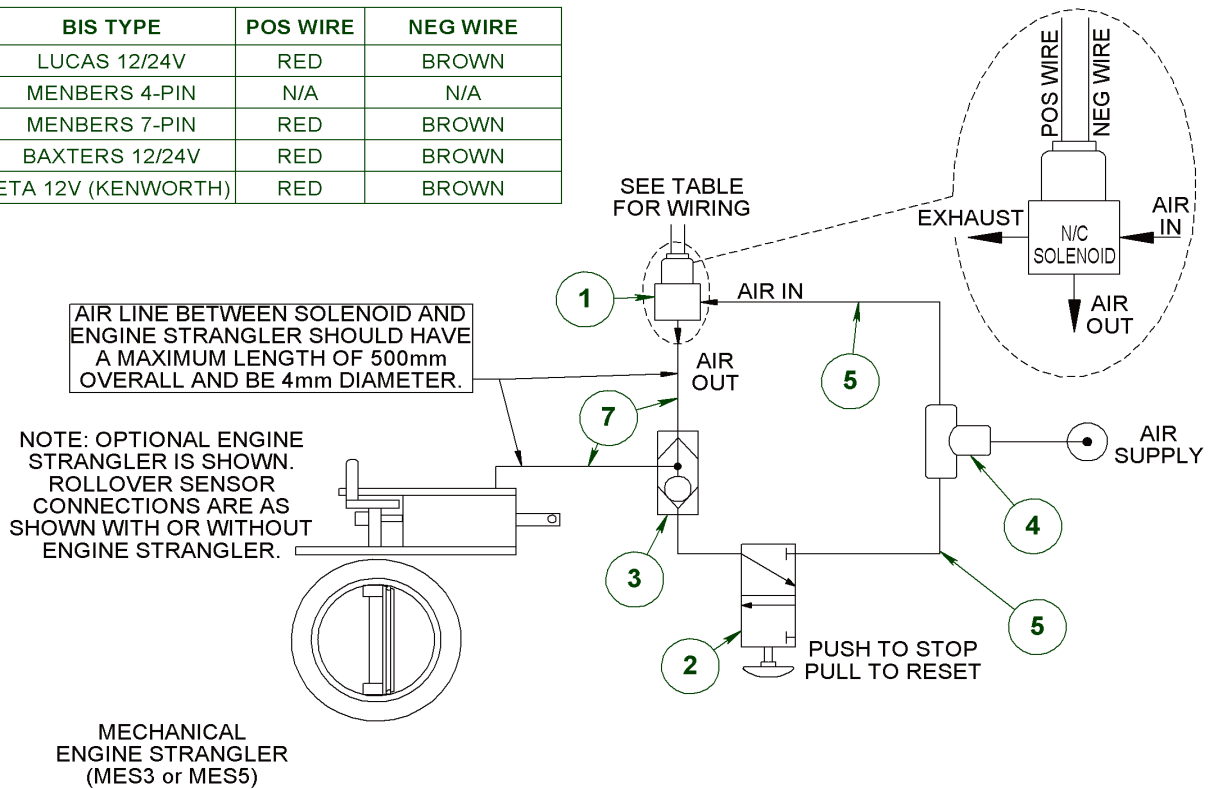


Air circuit for connecting Engine Strangler to Rollover Sensor (optional)

2.13 ROLLOVER SENSOR TO LIQUIP ENGINE STRANGLER

ROLLOVER SENSOR OUTPUT WIRES

BIS TYPE	POS WIRE	NEG WIRE
LUCAS 12/24V	RED	BROWN
MENBERS 4-PIN	N/A	N/A
MENBERS 7-PIN	RED	BROWN
BAXTERS 12/24V	RED	BROWN
ETA 12V (KENWORTH)	RED	BROWN

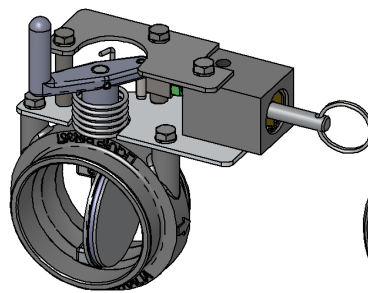
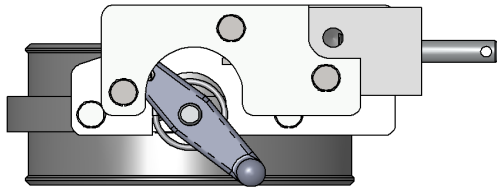


ITEM	PART No	DESCRIPTION	QTY
1	5605	SOLENOID VALVE 12V 1/8" FBSP	AS REQ'D
	1899	SOLENOID VALVE 24V 1/8" FBSP	AS REQ'D
2	5946	EMERGENCY STOP VALVE	1
3	2237	SHUTTLE VALVE 1/8" FBSP PORTS	1
4	9358	TEE M6 PUSH FITTINGS	1
5	1204	6mm NYLON AIR LINE	AS REQ'D
	5900	6mm PUSH x 1/8" MBSP ELBOW FITTING	AS REQ'D
6	5901	6mm PUSH x 1/8" MBSP STRAIGHT FITTING	AS REQ'D
	5620	4mm NYLON AIR LINE	AS REQ'D
7	7983	4mm PUSH x 1/8" MBSP ELBOW FITTING	AS REQ'D

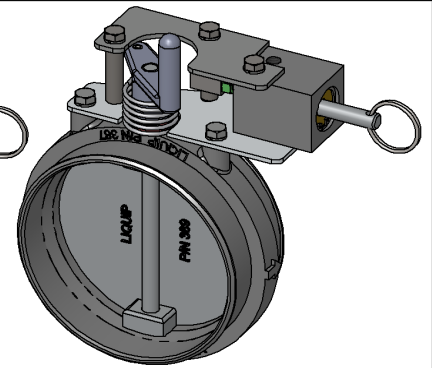
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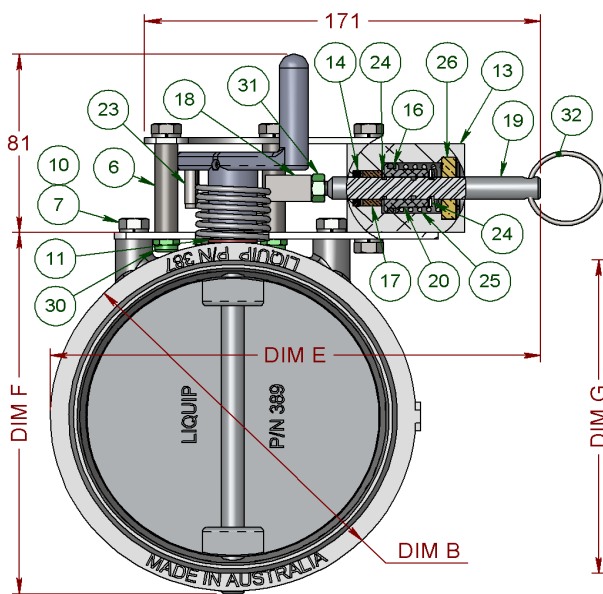
MESx MECHANICAL ENGINE STRANGLER



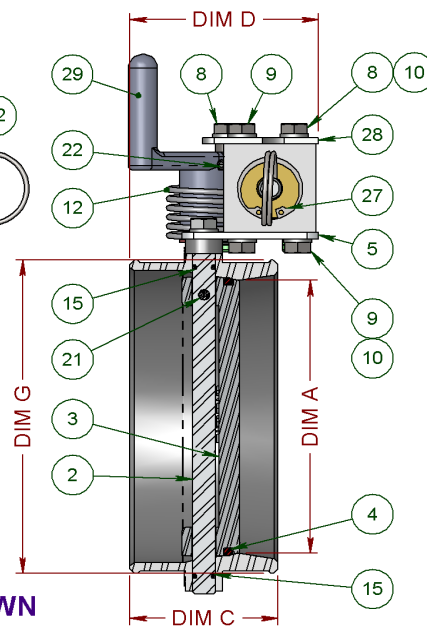
MES3 (OPEN)



MES5 (CLOSED)



MES5 SHOWN



	MES3	MES5
DIM A	Ø72.7	Ø123.5
DIM B	Ø108	Ø158
DIM C	51	64
DIM D	72.1	78.1
DIM E	185.5	211.9
DIM F	112.5	162.7
DIM G	Ø91	Ø142
* DIFFERING PARTS		
BODY	MES3-1	MES5-1
DISC	MES3-2	MES5-2
SHAFT	MES3-4	MES5-4
O-RING	4616	4600

ITEM	PART No	DESCRIPTION	QTY	MATERIAL
1	MES5-1*	BODY 5"	1	ALUMINIUM
2	MES5-4*	OPERATING SHAFT 5"	1	ST STEEL
3	MES5-2*	BUTTERFLY DISC 5"	1	ALUMINIUM
4	4600*	O-RING	1	VITON A
5	MES3-5	BASE PLATE	1	Z/P STEEL
6	MES3-8	SUPPORT LATCH	2	ST STEEL
7	3090	SETSCREW HEX HD IMPERIAL	2	ST STEEL
8	6563	BOLT HEX	2	ST STEEL
9	3240	SETSCREW HEX HD IMP	3	ST STEEL
10	0107	WASHER SPRING	7	Z/P STEEL
11	0813	WASHER FLAT	1	ST STEEL
12	4426	RETURN SPRING	1	ST STEEL
13	MES3-10	AIR RAM BODY	1	ALUMINIUM
14	0409	O-RING	1	VITON A
15	0214	O-RING	2	NITRILE
16	0164	O-RING TO BS1806 & SAE AS568A	1	NITRILE

ITEM	PART No	DESCRIPTION	QTY	MATERIAL
17	5608	BUSH 16 OD x 10 ID x 8 LONG	1	BRONZE
18	MES3-9	LATCH MECHANICAL ENGINE	1	ST STEEL
19	MES3-12	SPINDLE - AIR RAM	1	ST STEEL
20	MES3-11	PISTON - AIR RAM	1	ALUMINIUM
21	0909	SPRING (ROLL) PIN	1	Z/P STEEL
22	0907	SPRING (ROLL) PIN	1	Z/P STEEL
23	0914	SPRING (ROLL) PIN	1	Z/P STEEL
24	0091	E-CLIP IMPERIAL	2	STEEL
25	4427	SPRING COMPRESSION	1	ST STEEL
26	MES3-13	END CAP	1	BRASS
27	4346	CIRCLIP INTERNAL	1	ST STEEL
28	MES3-6	TOP PLATE	1	Z/P STEEL
29	MES3-3	OPERATING HANDLE	1	ALUMINIUM
30	0148	NUT HALF NYLOC IMPERIAL	2	Z/P STEEL
31	0128	NUT HEX	1	Z/P STEEL
32	0980	KEY RING 1-1/2" Z/P	1	Z/P STEEL

METERS - VALVES - VENTS - MANHOLES - HOSEREELS - OVERFILL PROTECTION - LOADING ARMS - ELECTRONIC DIPSTICKS



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