



## RESPA CF2 QUALITY CABIN ENVIRONMENT AIR SYSTEM FOR BOBCAT T590 TRACK LOADER AND S590 WHEEL LOADER

### IMPORTANT NOTES

The following design concept is for a basic RESPA CF2 (12vdc or 24vdc - please specify when ordering) External Air Filtration and Cab Pressuriser Kit (MERV+16 or HEPA>H13 Filter Element - please specify when ordering)


The System arrangement consists of:

- External Air- RESPA CF2 Unit: for Precleaning, Filtration and Pressurisation of the Cabin. This unit Precleans the External Air (>96% of debris is returned to the external environment), provides Filtered "Fresh Air" and Air Flow to pressurise the Cabin.
- The following drawings provide for general components for mounting and ducting of the kit.
- Optional ICPSensor (In- Cabin Pressure Sensor) is to monitor and Alarm if the Cabin Pressure drops below the set- point threshold. Audible and visual alarms are provided to indicate that the Cabin sealing has been compromised but primarily to indicate that the External Filter Element of the RESPA CF2 has become loaded, air flow has diminished and so the Filter Element requires replacement. For ICPS Setup refer to:- **Syklone Cab pressure Monitor System Installation Guidelines** (2020- SYKLITKTCABPRESEL1ENG- ICPS Manual- LSM).
- It is recommended that the RESPA Air outlet spigot is attached either directly to the machine cabin or the HVAC external air supply inlet plenum. Ensure HVAC external filter panel is removed so as Respa provides unrestricted clean filtered external air supply.
- If Respa is connected to machine cab and not via the HVAC external filter plenum then the HVAC external filter plenum must be sealed so as the only external air supply is via the Respa unit. This will in turn ensure that the HVAC is operated in recirculation mode only.

The Objectives of the technology is to provide:

- Highest protection of Operators Health to OEL Legislation Compliance for Airborne Particulate / Fibre Exposure.**
- Increase Safety- avoids Co2 concentration in the Cabin that can cause fatigue risk, micro- sleeps, drowsiness and acidosis.**
- Extension of Filter Element up to 1,000 hours.**
- Protection and extension of HVAC Service Life and functionality.**
- Increased Productivity.**

Cabin Pressurisation: Please note that it is the responsibility of the customer to ensure sealing of the Cabin to achieve >40 Pascal (optimum 80 Pascal - max 150 Pascal) cabin pressurisation. LSM Technologies can provide such work at additional charges.

Rev	Date	Changes	ECR	By	Client/Description: Farm and Garden Single Respa Unit System	Designed by	Checked by	Approved by	Date	Date	Scale						
A	19/11/20	Issued	0227	AF	This drawing is copyright protected. No part of this drawing in any form or means is to be replaced, stored by retrieval system, transmitted or used by third parties without the written permission of LSM Technologies Pty Ltd	AARONF	P.W.	Peter Woodford	23/03/21	05/11/20	N.T.S.						
B	23/11/20	Design Amendments	0233	JAL													
C	23/03/21	As-Built	0247	JAL													
													Ph: 07 3725 8100 Fax: 07 3725 8199 16 Bluestone Circuit Seventeen Mile Rocks QLD 4073 <a href="http://www.lsmtechnologies.com.au/">http://www.lsmtechnologies.com.au/</a>	Cabin Air Quality System Title Page			
														Drawing Number 03-03-0495	Revision C	Sheet 1 / 6	

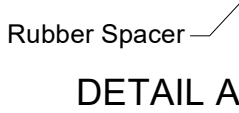


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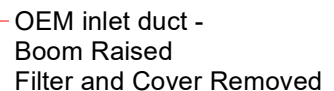
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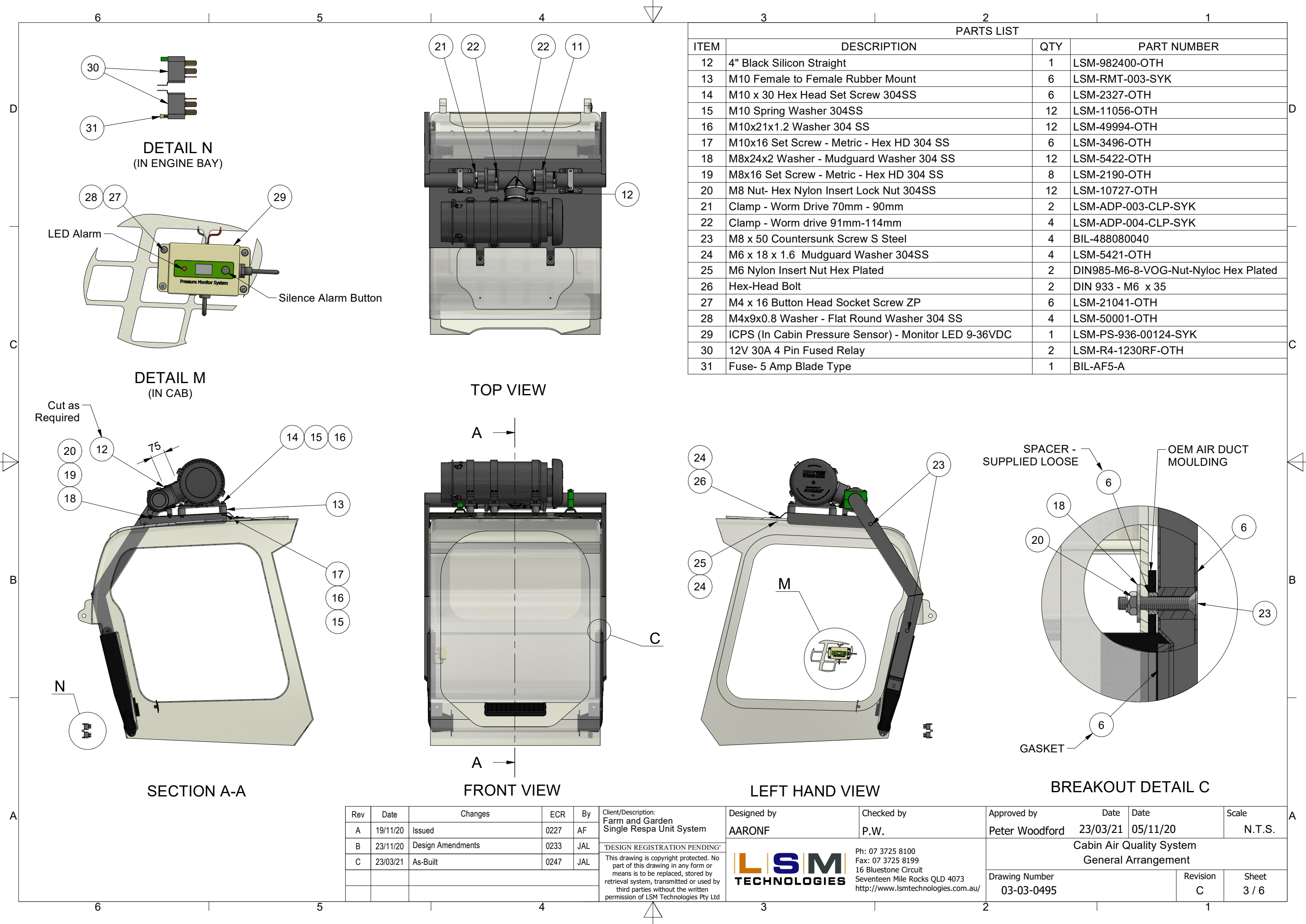


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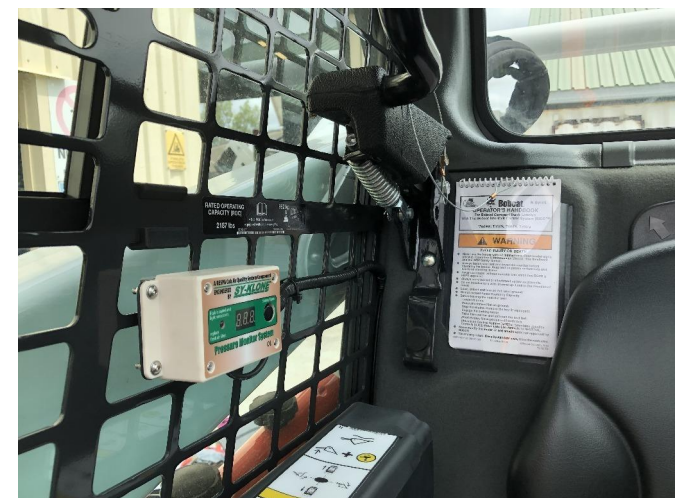
PARTS LIST			
ITEM	DESCRIPTION	QTY	PART NUMBER
12	4" Black Silicon Straight	1	LSM-982400-OTH
13	M10 Female to Female Rubber Mount	6	LSM-RMT-003-SYK
14	M10 x 30 Hex Head Set Screw 304SS	6	LSM-2327-OTH
15	M10 Spring Washer 304SS	12	LSM-11056-OTH
16	M10x21x1.2 Washer 304 SS	12	LSM-49994-OTH
17	M10x16 Set Screw - Metric - Hex HD 304 SS	6	LSM-3496-OTH
18	M8x24x2 Washer - Mudguard Washer 304 SS	12	LSM-5422-OTH
19	M8x16 Set Screw - Metric - Hex HD 304 SS	8	LSM-2190-OTH
20	M8 Nut- Hex Nylon Insert Lock Nut 304SS	12	LSM-10727-OTH
21	Clamp - Worm Drive 70mm - 90mm	2	LSM-ADP-003-CLP-SYK
22	Clamp - Worm drive 91mm-114mm	4	LSM-ADP-004-CLP-SYK
23	M8 x 50 Countersunk Screw S Steel	4	BIL-488080040
24	M6 x 18 x 1.6 Mudguard Washer 304SS	4	LSM-5421-OTH
25	M6 Nylon Insert Nut Hex Plated	2	DIN985-M6-8-VOG-Nut-Nyloc Hex Plated
26	Hex-Head Bolt	2	DIN 933 - M6 x 35
27	M4 x 16 Button Head Socket Screw ZP	6	LSM-21041-OTH
28	M4x9x0.8 Washer - Flat Round Washer 304 SS	4	LSM-50001-OTH
29	ICPS (In Cabin Pressure Sensor) - Monitor LED 9-36VDC	1	LSM-PS-936-00124-SYK
30	12V 30A 4 Pin Fused Relay	2	LSM-R4-1230RF-OTH
31	Fuse- 5 Amp Blade Type	1	BIL-AF5-A

Rev	Date	Changes	ECR	By	Client/Description: Farm and Garden Single Respa Unit System	Designed by AARONF	Checked by P.W.	Approved by Peter Woodford	Date 23/03/21	Date 05/11/20	Scale N.T.S.
A	19/11/20	Issued	0227	AF	'DESIGN REGISTRATION PENDING'  This drawing is copyright protected. No part of this drawing in any form or means is to be replaced, stored by retrieval system, transmitted or used by third parties without the written permission of LSM Technologies Pty Ltd	  Ph: 07 3725 8100 Fax: 07 3725 8199 16 Bluestone Circuit Seventeen Mile Rocks QLD 4073 <a href="http://www.lsmtechnologies.com.au/">http://www.lsmtechnologies.com.au/</a>		Cabin Air Quality System General Arrangement			
B	23/11/20	Design Amendments	0233	JAL				Drawing Number 03-03-0495	Revision C	Sheet 3 / 6	
C	23/03/21	As-Built	0247	JAL							





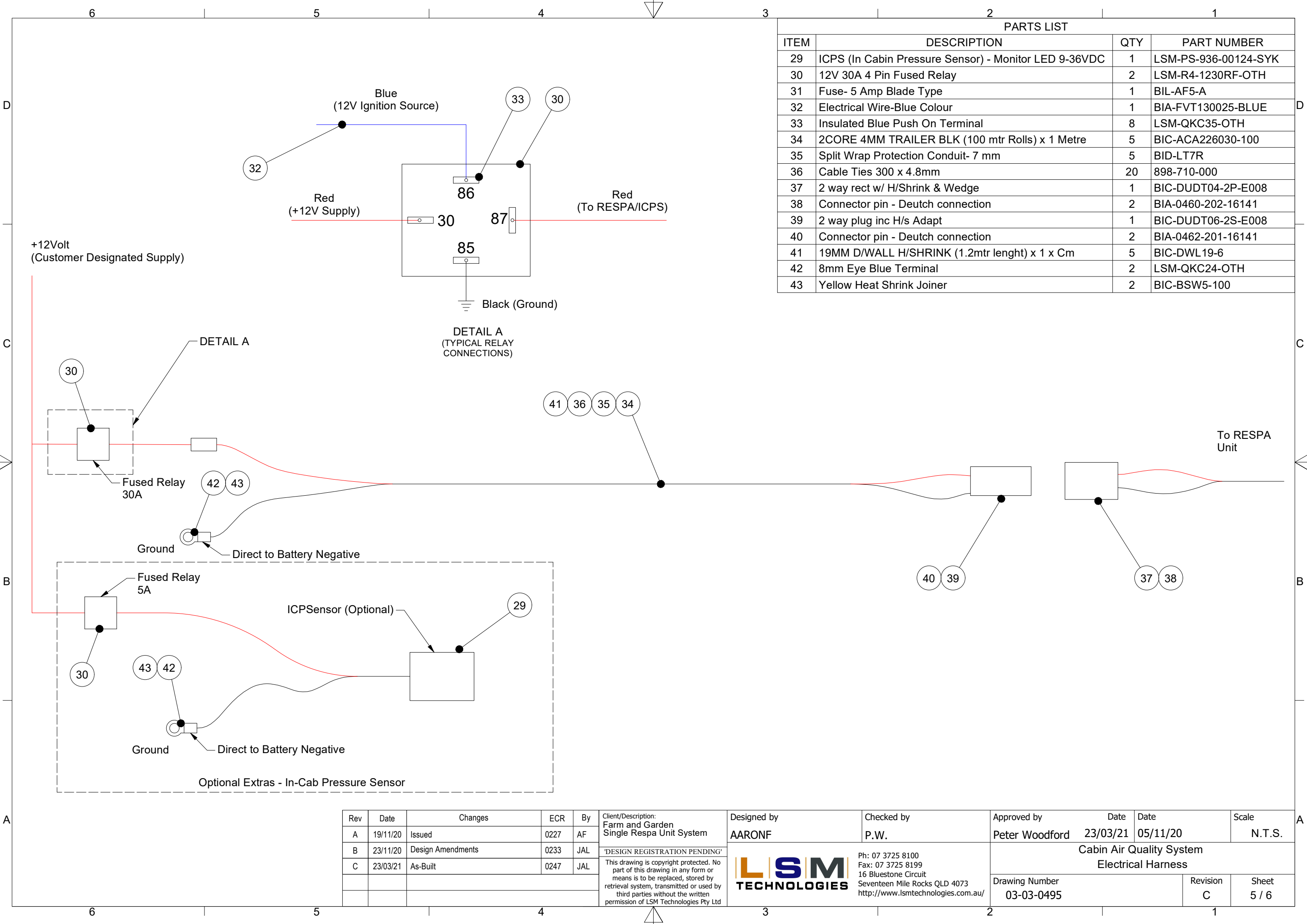
BOBCAT T590 RESPA INSTALL - ALLFLEET MECHANICAL - ROCKHAMPTON



BOBCAT S590 RESPA INSTALL - LSM TECHNOLOGIES - BRISBANE

Rev	Date	Changes	ECR	By	Client/Description:	Designed by	Checked by	Approved by	Date	Date	Scale
A	19/11/20	Issued	0227	AF	Farm and Garden Single Respa Unit System	AARONF	P.W.	Peter Woodford	23/03/21	05/11/20	N.T.S.
B	23/11/20	Design Amendments	0233	JAL	"DESIGN REGISTRATION PENDING" This drawing is copyright protected. No part of this drawing in any form or means is to be replaced, stored by retrieval system, transmitted or used by third parties without the written permission of LSM Technologies Pty Ltd	<b>LSM TECHNOLOGIES</b> Ph: 07 3725 8100 Fax: 07 3725 8199 16 Bluestone Circuit Seventeen Mile Rocks QLD 4073 <a href="http://www.lsmtechnologies.com.au/">http://www.lsmtechnologies.com.au/</a>		Cabin Air Quality System Install Images			
C	23/03/21	As-Built	0247	JAL				Drawing Number	Revision	Sheet	
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29	ICPS (In Cabin Pressure Sensor) - Monitor LED 9-36VDC	1	LSM-PS-936-00124-SYK
30	12V 30A 4 Pin Fused Relay	2	LSM-R4-1230RF-OTH
31	Fuse- 5 Amp Blade Type	1	BIL-AF5-A
32	Electrical Wire-Blue Colour	1	BIA-FVT130025-BLUE
33	Insulated Blue Push On Terminal	8	LSM-QKC35-OTH
34	2CORE 4MM TRAILER BLK (100 mtr Rolls) x 1 Metre	5	BIC-ACA226030-100
35	Split Wrap Protection Conduit- 7 mm	5	BID-LT7R
36	Cable Ties 300 x 4.8mm	20	898-710-000
37	2 way rect w/ H/Shrink & Wedge	1	BIC-DUDT04-2P-E008
38	Connector pin - Deutch connection	2	BIA-0460-202-16141
39	2 way plug inc H/s Adapt	1	BIC-DUDT06-2S-E008
40	Connector pin - Deutch connection	2	BIA-0462-201-16141
41	19MM D/WALL H/SHRINK (1.2mtr lenght) x 1 x Cm	5	BIC-DWL19-6
42	8mm Eye Blue Terminal	2	LSM-QKC24-OTH
43	Yellow Heat Shrink Joiner	2	BIC-BSW5-100

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B	23/11/20	Design Amendments	0233	JAL							
C	23/03/21	As-Built	0247	JAL							
								Drawing Number 03-03-0495	Revision C	Sheet 5 / 6	