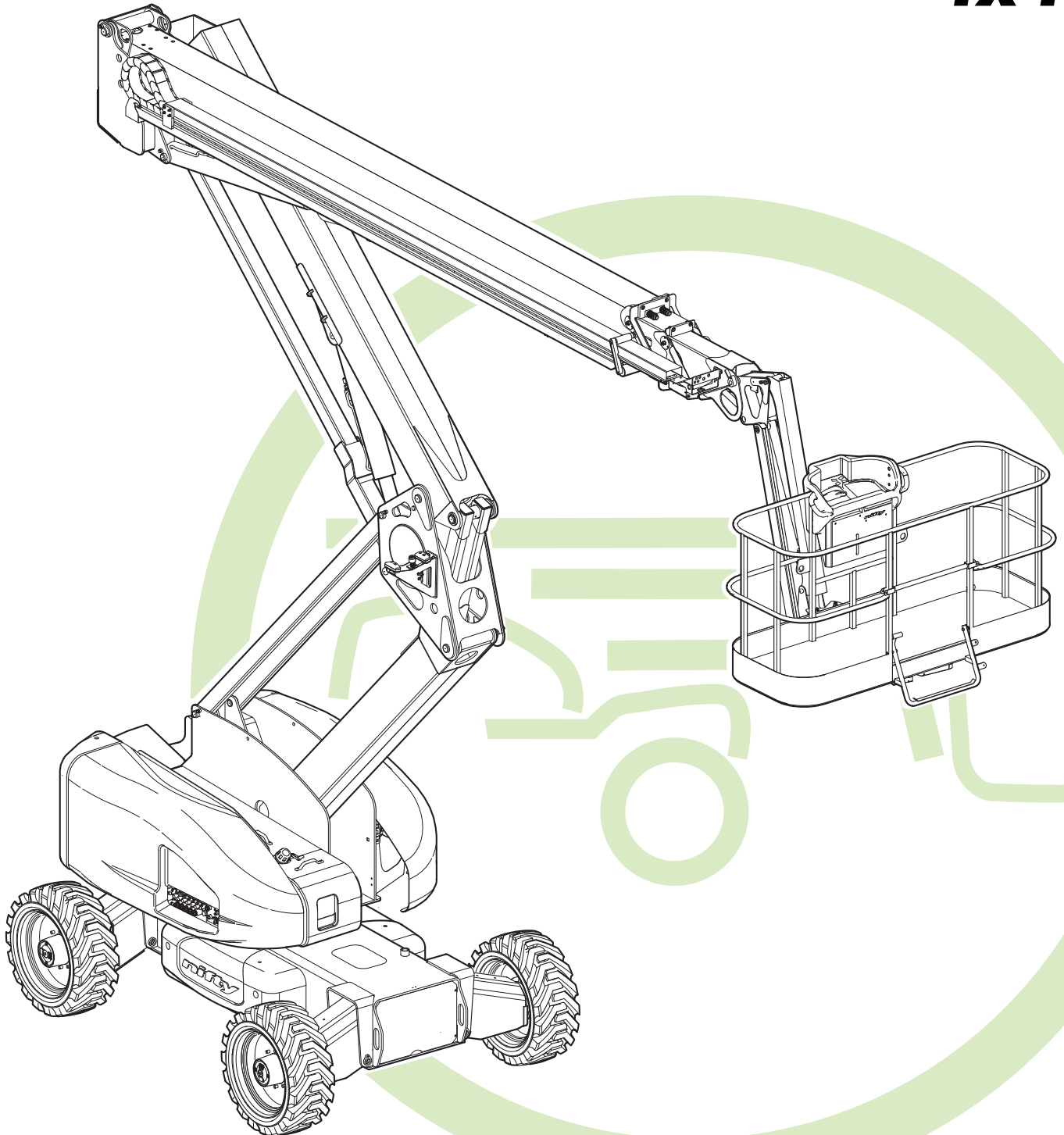




# nifty

## **HR28 SP85** **4x4**



niftylift.com

**M50440/03**



**Issue 3**  
**(February 2015)**

**illustrated parts manual**

**Manuel illustré de pièces détachées**

**Illustrierte Stückliste**

**Manual de piezas ilustrado**



Please Note, at the time of going to press, all information, illustrations details and descriptions contained herein are valid. Niftylift reserves the right to change, alter, modify or improve its products without any obligation to install them on previously manufactured machines.

Readers of this manual requiring further information should contact us at:

**Niftylift Ltd.**  
**Fingle Drive**  
**Stonebridge**  
**Milton Keynes**  
**MK13 OER**  
**United Kingdom**

**Niftylift Inc.**  
**1525 S.Buncombe Road**  
**Greer**  
**SC 29651**  
**USA**

Tel +44 (0)1908 857899  
 Fax +44 (0)1908 227460

1 864 968 8881  
 1 864 968 8836

## Ordering of Parts

When ordering a replacement part for your Niftylift product, please state the following:

- Machine Model and Serial number      Niftylift Part number
- Full description of the part              Quantity required
- Purchase Order number                    Destination address

## Machine Information

Model number. .... Date of Purchase .....

Serial number .....

Veuillez noter qu'au moment de la mise sous presse, l'ensemble des informations, illustrations, détails et descriptions, contenus dans le présent document, sont valides. Niftylift se réserve le droit de changer ou d'améliorer ses produits sans obligation de montage sur les anciennes machines.

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**United Kingdom**

**Niftylift Inc.**  
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**USA**

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## Commande de pièces

Lors de la commande de pièces de rechange pour votre machine Niftylift, veuillez indiquer ce qui suit:

- Modèle et numéro de série de la machine      Référence de la pièce Niftylift
- Description complète de la pièce              Quantité requise
- Numéro de commande                              Adresse de destination

## Informations relatives à la machine

Numéro de modèle. .... Date d'achat .....

Numéro de série .....



Bitte nehmen Sie zur Kenntnis, dass alle hierin enthaltenen Informationen, Illustrationen und Beschreibungen zum Zeitpunkt des Drucks gültig sind. Niftylift behält sich das Recht vor, Produkte zu wechseln, ändern, modifizieren und zu verbessern, ohne verpflichtet zu sein, sie an früher gefertigten Maschinen zu installieren.

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**Fingle Drive**  
**Stonebridge**  
**Milton Keynes**  
**MK13 OER**  
**Großbritannien**

**Niftylift Inc.**  
**1525 S.Buncombe Road**  
**Greer**  
**SC 29651**  
**USA**

Tel +44 (0)1908 857899  
 Fax +44 (0)1908 227460

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## Bestellen von Ersatzteilen

Bei der Bestellung eines Ersatzteils für Ihr Produkt von Niftylift geben Sie bitte folgende Einzelheiten an:

- Maschinenmodell und Seriennummer                      Niftylift Art.-Nr.
- Ausführliche Beschreibung des Teils                      Erforderliche Menge
- Bestellnummer    Bestimmungsadresse

## Maschineninformationen

Modellnummer ..... Kaufdatum. ....  
 Seriennummer. ....

Por favor, observe que en el momento de pasar a imprenta, toda la información, ilustraciones y descripciones contenidas en el presente documento eran válidas. Niftylift se reserva el derecho de cambiar, alterar, modificar o mejorar sus productos, sin obligación alguna de instalar dichos cambios en máquinas fabricadas anteriormente.

Los usuarios de este manual que requieran más información, deberán ponerse en contacto con nosotros en:

**Niftylift Ltd.**  
**Fingle Drive**  
**Stonebridge**  
**Milton Keynes**  
**MK13 OER**  
**United Kingdom**

**Niftylift Inc.**  
**1525 S.Buncombe Road**  
**Greer**  
**SC 29651**  
**USA**

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 1 864 968 8836

## Pedido de piezas

Al realizar el pedido de una pieza de recambio para su producto Niftylift, sírvase especificar lo siguiente:

- Modelo y número de serie de la máquina                      Número de pieza Niftylift
- Descripción completa de la pieza                              Cantidad requerida
- Número de orden de compra                                      Dirección de destino

## Información de la máquina

Número de modelo ..... Fecha de compra. ....  
 Número de serie .....





# Parts Order Form (make copies for use)

**niftylift**

**Bon de commande de pièces** (Faire des photocopies pour vos commandes ultérieures)

tel +44 (0)1908 857899

**Bestellformular für Ersatzteile** (bitte Kopien zur zukünftigen Verwendung machen)

fax +44 (0)1908 227460

**Impreso de pedido de piezas** (haga copias para el uso)

www.niftylift.com

**name** nom name nombre

**date** date datum fecha

**address** adresse adresse dirección

**delivery address**

adresse de livraison

lieferadresse

dirección de entrega

**telephone** téléphone tel.-Nr. teléfono

**fax** fax-Nr.

**purchase order number**

numéro de commande

bestellnummer

número de orden de compra

**email** e-mail

<b>Part Number</b> Référence pièce Art.-Nr. Número de pieza	<b>description</b> description beschreibung descripción	<b>quantity</b> quantité menge cantidad	<b>price</b> prix preis precio
P			
P			
P			
P			
P			
P			
P			
P			

**Note:** If items have decals/labels attached, these are **not included** (unless stated otherwise), they must be ordered separately using the part (P) number printed on the decal.

**Remarque:** si les composants sont dotés d'autocollants/étiquettes, ceux-ci **ne sont pas inclus** (sauf avis contraire). Ils doivent être commandés séparément en indiquant le numéro de référence (P) imprimé sur l'autocollant.

**Anmerkung:** Wenn an Gegenständen Klebebilder/Etiketten angebracht sind, sind diese (sofern nicht anders angegeben) **nicht enthalten** und müssen separat mit Hilfe der auf den Klebebildern abgedruckten Teilenummern (P) bestellt werden.

**Nota:** Si los artículos llevan acopladas calcomanías/etiquetas, éstas **no se incluirán** (a menos que se indique lo contrario); deberán pedirse por separado utilizando el número de pieza (P) impreso en la calcomanía.

Alternatively, details of your order can be emailed to **service@niftylift.com**

Alternativement, le détail de votre commande peut nous être envoyé par email à **service@niftylift.com**

Als Alternative können Sie Ihre Bestellung auch an **service@niftylift.com** senden

Alternativamente, los detalles de su pedido pueden enviarse por e-mail a **service@niftylift.com**

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## chassis

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3.3	telescope assembly (part 2) .....	<b>3-11</b>
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4.1	cage assembly .....	<b>4-3</b>
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## Issue Records

Chapter	Pages	Issue	Date	Comments/Changes
Introduction	8	3	02/2015	Third issue
1	12	2	02/2015	Revision on pages 1-2/3
2	32	3	02/2015	Revision on pages 2-12/13
3	20	2	04/2014	Second issue
4	16	3	02/2015	Revisions on pages 4-2/3
5	12	2	02/2015	Second issue

\* When ordering parts for machines other than the stated serial number, it is advisable to contact the Parts Department;

	United Kingdom	USA
<i>tel</i>	<b>+44 (0)1908 857899</b>	<b>1 864 968 8881</b>
<i>fax</i>	<b>+44 (0)1908 227460</b>	<b>1 864 968 8836</b>
<i>email</i>	<b>service@nifylift.com</b>	<b>niftyusa@niftylift.com</b>



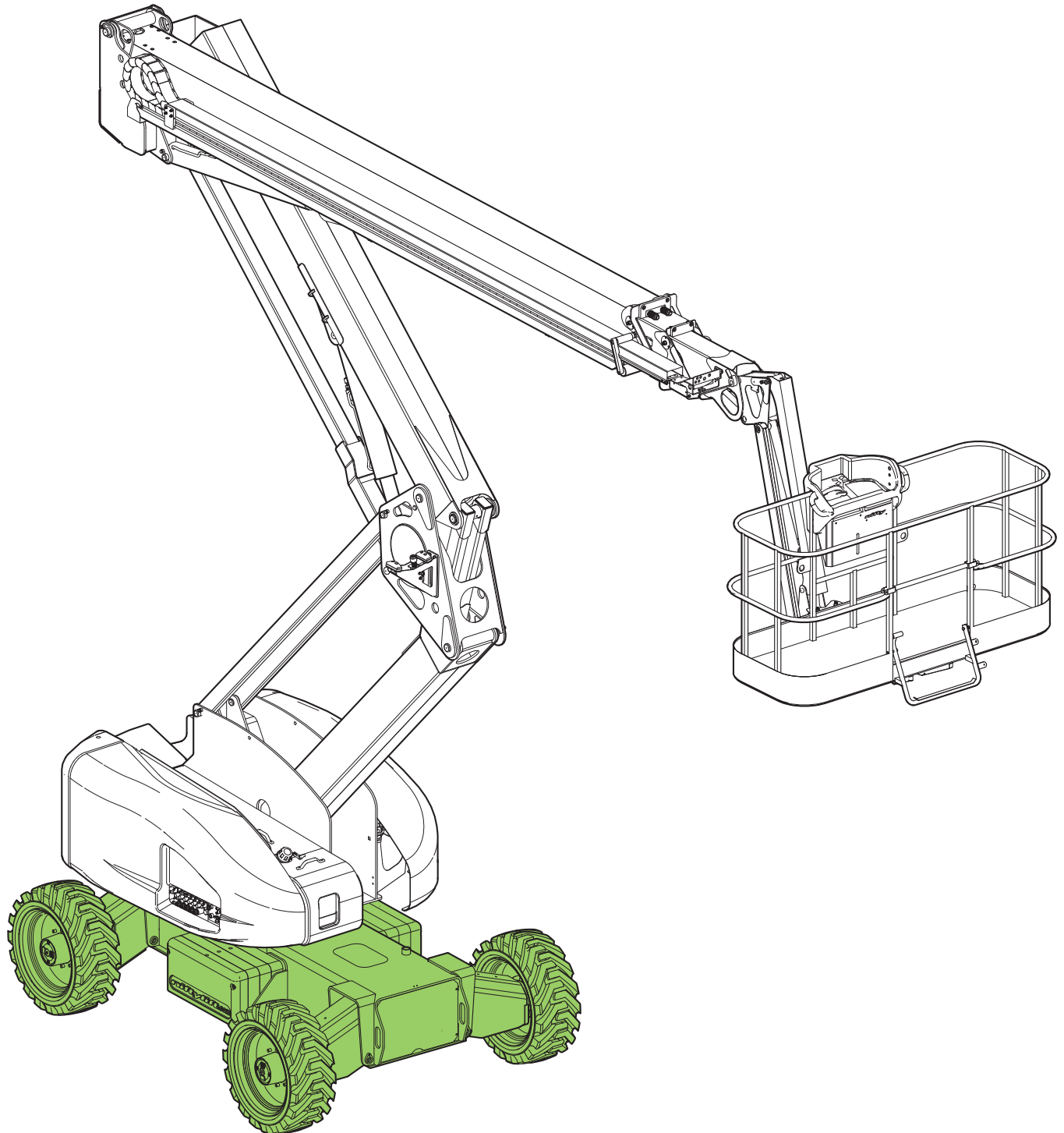
**nifty**



## HR28 (SP85)



*illustrated parts manual*  
*Manuel illustré de pièces détachées*  
*Illustrierte Stückliste*  
*Manual de piezas ilustrado*



**1**

**chassis assembly**

french  
german  
spanish



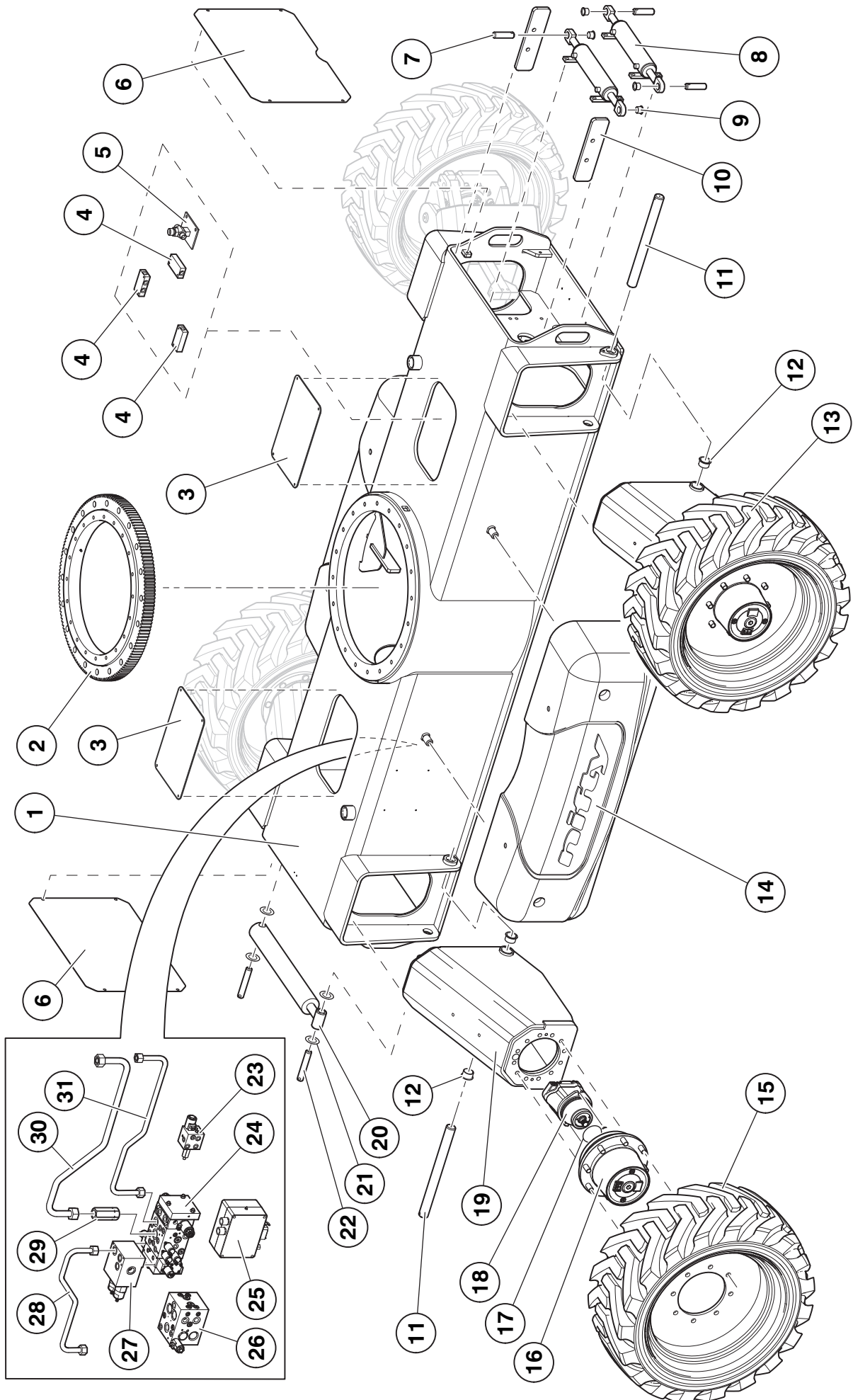
## 1.1 base assembly

Item	Description				Part Number
1	Base fabrication				P20345
2	Slew ring				P22247
3	Access cover				P22010
4	Manifold - 4 way				P24950
5	T-Piece				P25951
6	Cover, Base end				P26080
7	Pin - 94mm				P12953
8	Cylinder				P12167
9	Bush				P12250
10	Retaining plate				P24649
11	Pin - 455mm				P23002
12	Buah				P12528
13	Front axle assembly See "axle assembly (front)" on page 1-6.				N/A
14	Ballast weight				P25782
15	Wheel & tyre Non-marking				P24751 P25214
16	Gearbox				P22524
17	Seal Seal - Brake port *				P24120 P24119
18	Motor (Rear)				P24813
19	Axle (Rear)				P24607
20	Suspension cylinder Seal kit *				P25005 P26182
21	Washer				P10035
22	Pin - 158mm				P17424

\* Not illustrated

french  
german  
spanish

chassis assembly



french  
german  
spanish

**chassis assembly**

**Figure 1.1 Base assembly**

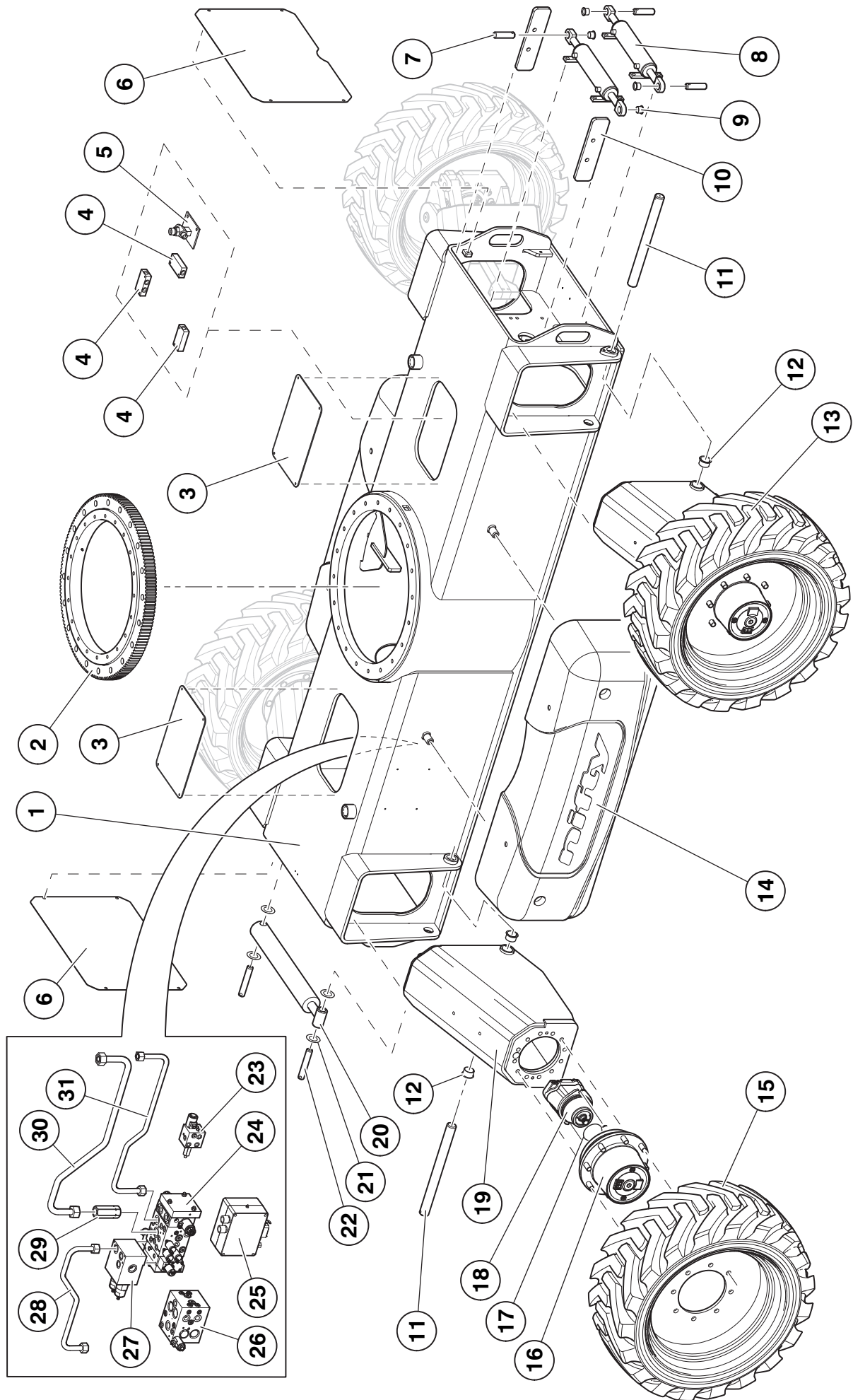
## 1.1 continued

Item	Description				Part Number
23	Valve - Suspension See "suspension valve block" on page 1-8.				P23447
24	Main Drive Valve				P22412
25	Chassis box assy.				P24499
26	Valve - 4WD				P22538
27	Valve - Motion control				P24946
28	Tube - Diff lock				P26014
29	Non-return valve (1")				P24987
30	Tube - Return				P26013
31	Tube - Pressure				P26012

french  
german  
spanish

chassis assembly





french  
german  
spanish

**chassis assembly**

**Figure 1.1 Base assembly**

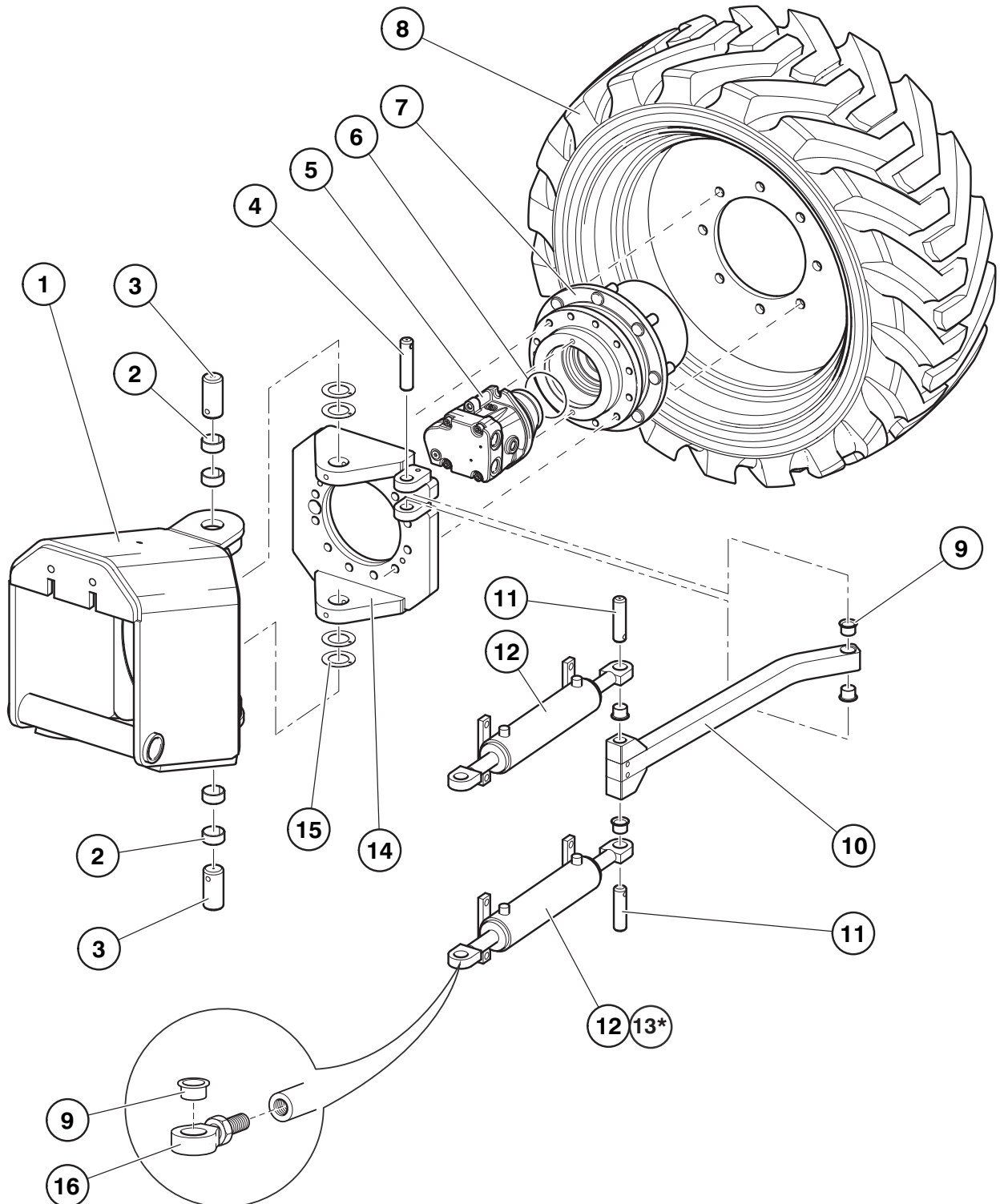
## 1.2 axle assembly (front)

Item	Description				Part Number
1	Axle, Steer				P25259
2	Bush				P19648
3	Pin - 85mm				P25446
4	Pin - 110mm				P13157
5	Motor				P22261
6	Seal Seal - Brake port *				P24120 P24119
7	Gearbox				P22524
8	Wheel & tyre <i>Non-marking</i> *				P24751 P25214
9	Bush				P12250
10	Track rod				P22918
11	Pin - 94mm				P12953
12	Cylinder				P12167
13 *	Seal kit for item 12				P13268
14	Steer plate LH *RH				P22262 P22263
15	Thrust washer				P14994
16	Eyelet				P18876

\* Not illustrated

french  
german  
spanish

chassis assembly



french  
german  
spanish

**chassis assembly**

**Figure 1.2 Axle assembly (front)**

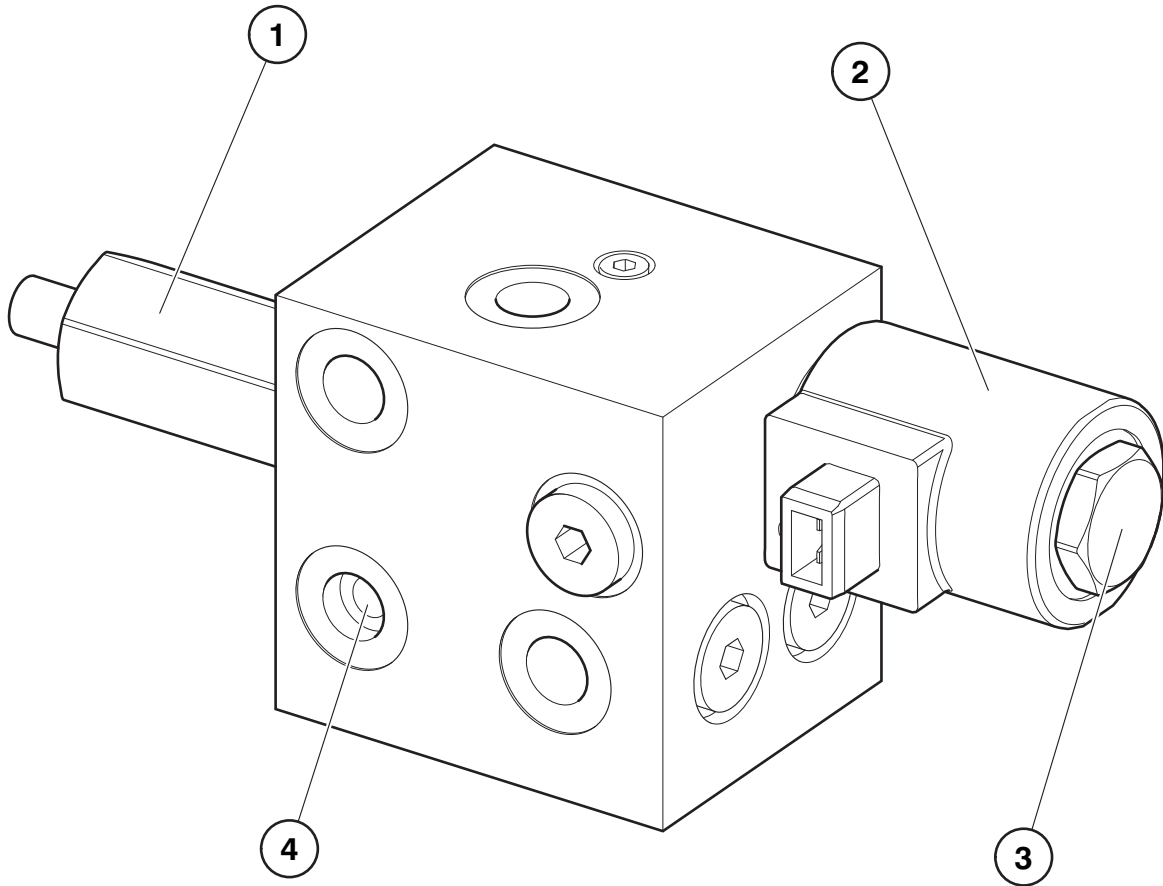
## 1.3 suspension valve block

Item	Description				Part Number
	Complete assembly				<b>P23447</b>
<b>1</b>	Pressure reducing cartridge - <b>CT1</b>				<b>P25804</b>
<b>2</b>	Coil - 12v				<b>P25806</b>
<b>3</b>	Solenoid cartridge <b>CT2</b>				<b>P25805</b>
<b>4</b>	Check valve - <b>CT3</b>				<b>P25807</b>

\* Not illustrated

french  
german  
spanish

chassis assembly



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german  
spanish

**chassis assembly**

**Figure 1.3 Suspension valve**



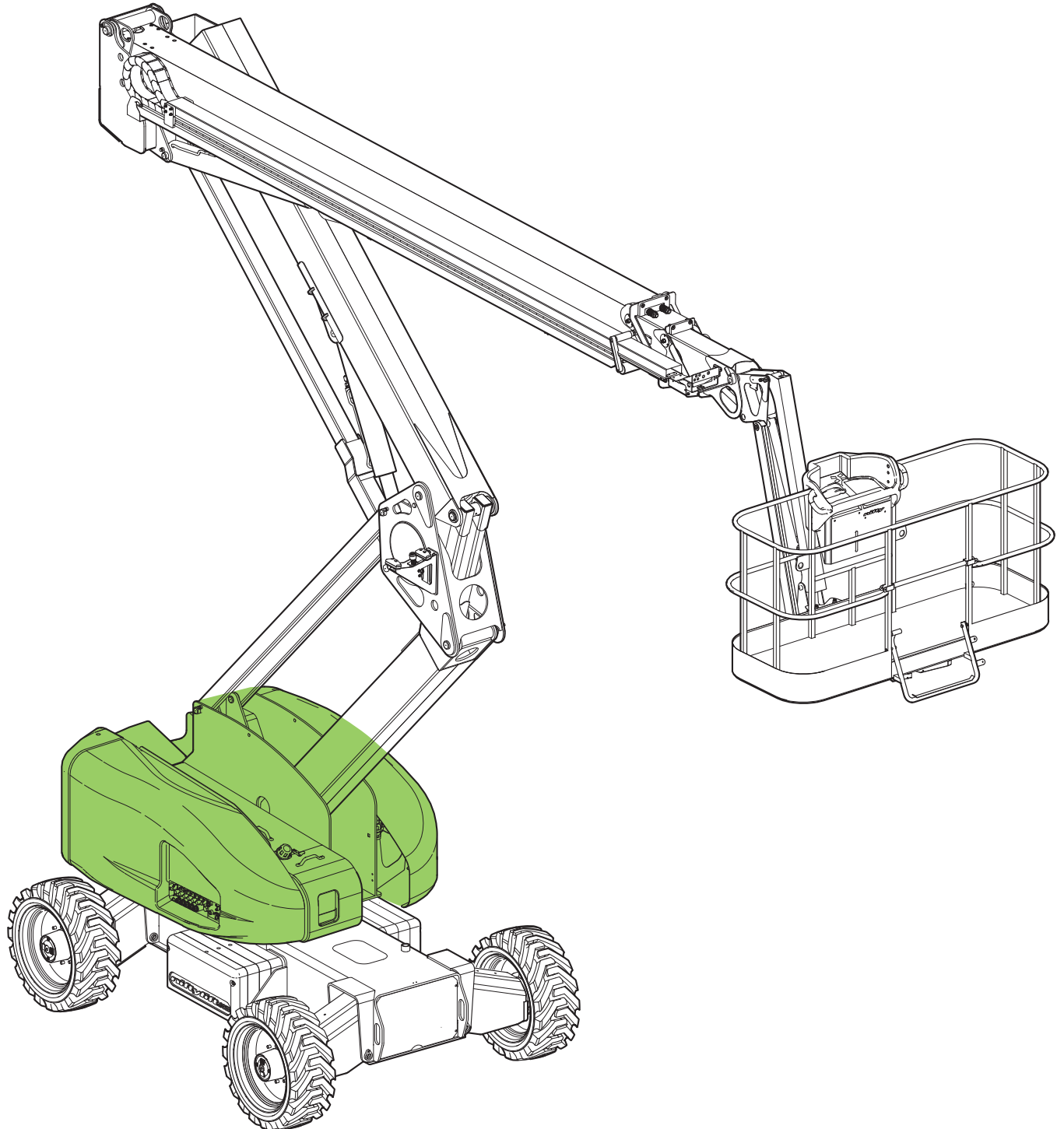


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## HR28 (SP85)

*illustrated parts manual*  
*Manuel illustré de pièces détachées*  
*Illustrierte Stückliste*  
*Manual de piezas ilustrado*



**2**



**superstructure**

french  
german  
spanish

## 2.1 superstructure assembly - hybrid (control side)

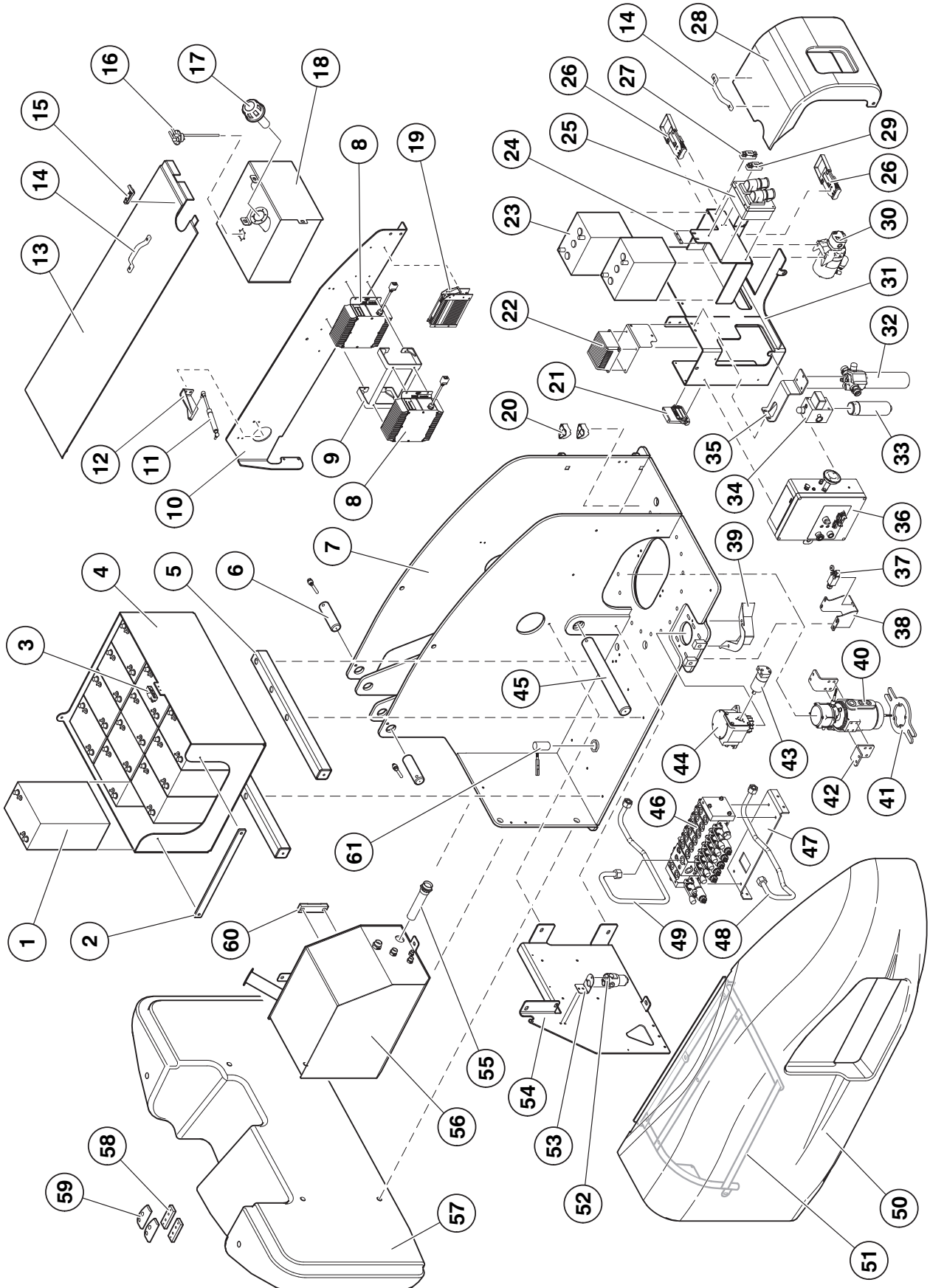
Item Description Part Number

1	Battery			P23949
2	Retaining bar			P25526
3	Fuse - 325A Fuse holder			P19924 P11976
4	Battery tray			P23043
5	Support			P24611
6	Pin - 165mm			P24056
7	Superstructure			P25375
8	Battery charger			P25194
9	Bracket			P24588
10	Rear Bracket			P25100
11	Gas strut			P16953
12	Bracket - Gas strut			P24565
13	Canopy - Central			P25404
14	Handle			P10241
15	Catch			P14454
16	Sender			P24626
17	Filler breather			P21130
18	Diesel tank - 40 litre			P26156
19	Controller (Unprogrammed)			P23305
20	Tilt sensor			P26079
21	Valve controller			P27215
22	Step down unit Bracket			P23888 P26492
23	Battery			P24812
24	Spacer			P15899
25	Charger inlet unit *230V 110V/230V			P26961 P26960
26	Handle Release bracket			P24688 P24687
27	Fuse - 125A Fuse holder			P12696 P11976
28	Canopy			P25427

\* Not illustrated



<b>29</b>	Fuse - 225A Fuse holder				<b>P11977</b> <b>P11976</b>
<b>30</b>	Emergency pump				<b>P22641</b>



french  
german  
spanish

**superstructure**



**Figure 2.1 Superstructure assembly (Hybrid - Part 1)**

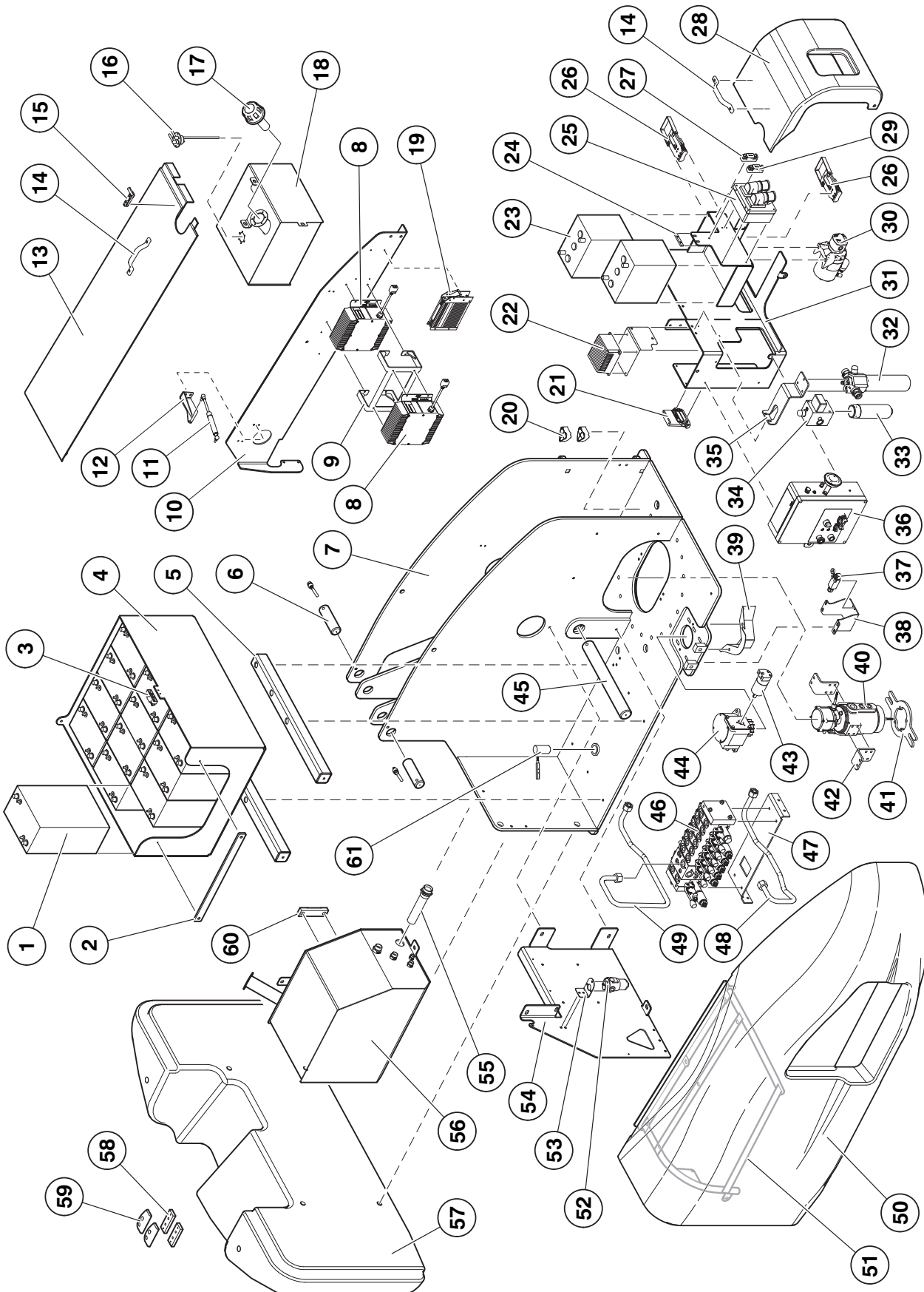
## 2.1 continued

Item	Description	Part Number
31	Bracket - Main control	P25154
32	Filter - Inline return	P24922
33	Pressure filter bowl Element ONLY	P23276 P24944
34	Boom enable valve	P24881
35	Bracket	P25197
36	Base control assembly	P26058
37	Microswitch	P19118
38	Bracket	P25611
39	Guard - Slew	P23395
40	Swivel joint	P22695
41	Plate	P22924
42	Foot - for item 40	P22923
43	Motor	P15686
44	Gearbox	P15672
45	Pin - 500mm	P24054
46	Valve - Main controls	P22411
47	Bracket	P25201
48	Tube - Pressure	P26015
49	Tube - Return	P26016
50	Canopy - LH	P23032
51	Support bracket LH	P24556
52	Pressure filter Element * 3 micron 10 micron	P26267 P26272 P26273
53	Bracket	P26326
54	Bracket - Main side	P25202
55	Suction strainer	P20994
56	Hydraulic tank	P25152
57	Counter weight	P21297
58	Spacer	P16883
59	Rubber pad	P16877

french  
german  
spanish

superstructure

60	Gauge				P13253
61	Locking pin - Slew Handle				P25587 P22253



french  
german  
spanish

superstructure

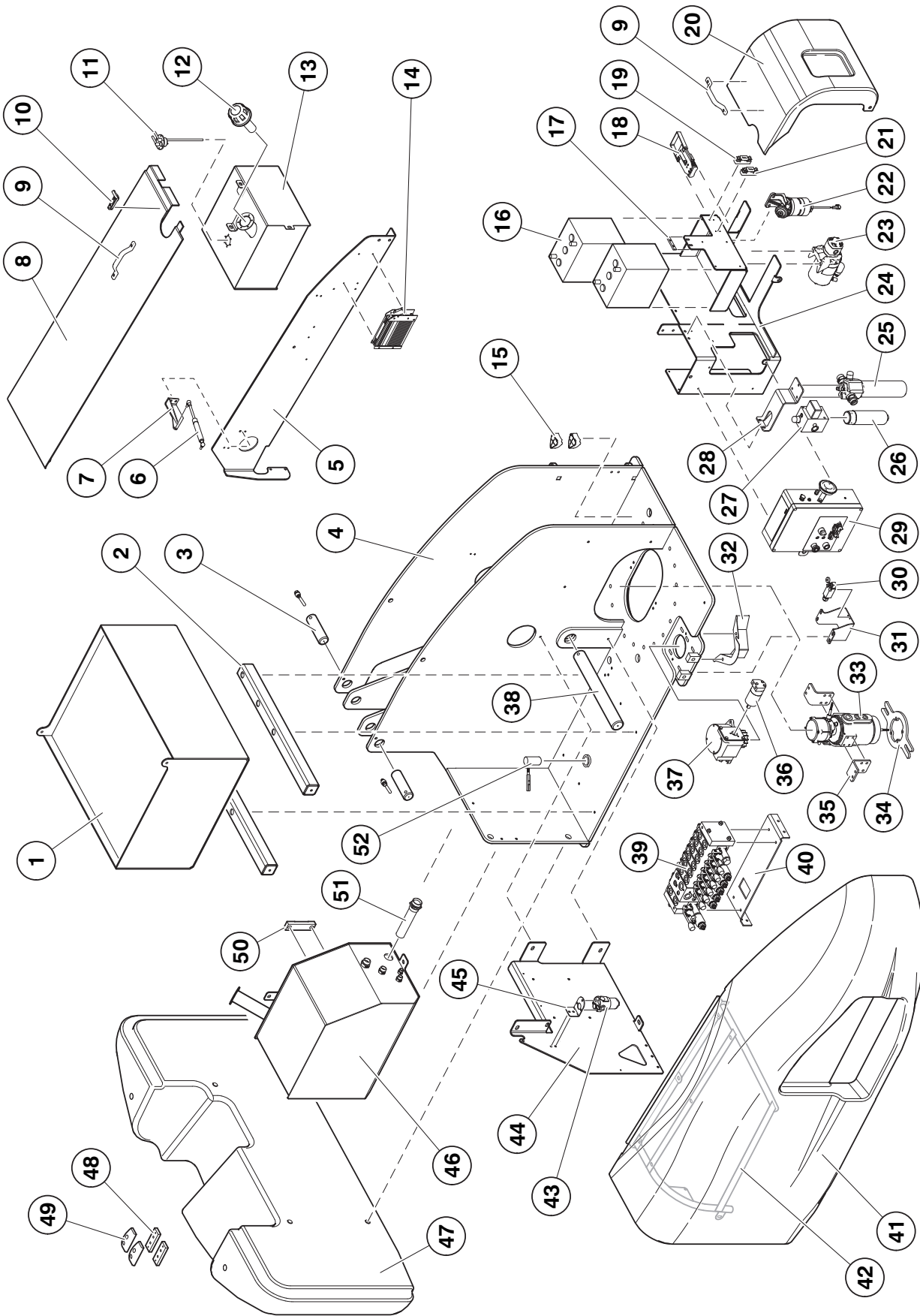
Figure 2.1 Superstructure assembly (Hybrid - Part 1)

## 2.2 superstructure assembly - diesel (control side)

Item Description Part Number

Item	Description	Part Number
1	Filled ballast carrier	P26929
2	Support	P24611
3	Pin - 165mm	P24056
4	Superstructure	P25375
5	Rear Bracket	P25100
6	Gas strut	P16953
7	Bracket - Gas strut	P24565
8	Canopy - Central	P25404
9	Handle	P10241
10	Catch	P14454
11	Sender	P24626
12	Filler breather	P21130
13	Diesel tank - 40 litre	P26156
14	Safety Controller (Not programmed)	P23305
15	Tilt sensor	P26079
16	Battery	P24812
17	Spacer	P15899
18	Handle bracket Release bracket	P24688 P24687
19	Fuse - 325A Fuse holder	P19924 P11976
20	Canopy	P25478
21	Fuse - 225A Fuse holder	P11977 P11976
22	Fuel filter & pump Filter ONLY	P25006 P27132
23	Emergency pump	P22641
24	Bracket - Main control	P25154
25	Filter - Inline return Element ONLY Indicator - 2 bar	P24922 P24923 P24924

\* Not illustrated



french  
german  
spanish

**superstructure**

**Figure 2.2 Superstructure assembly (Diesel - part 1)**

## 2.2 continued

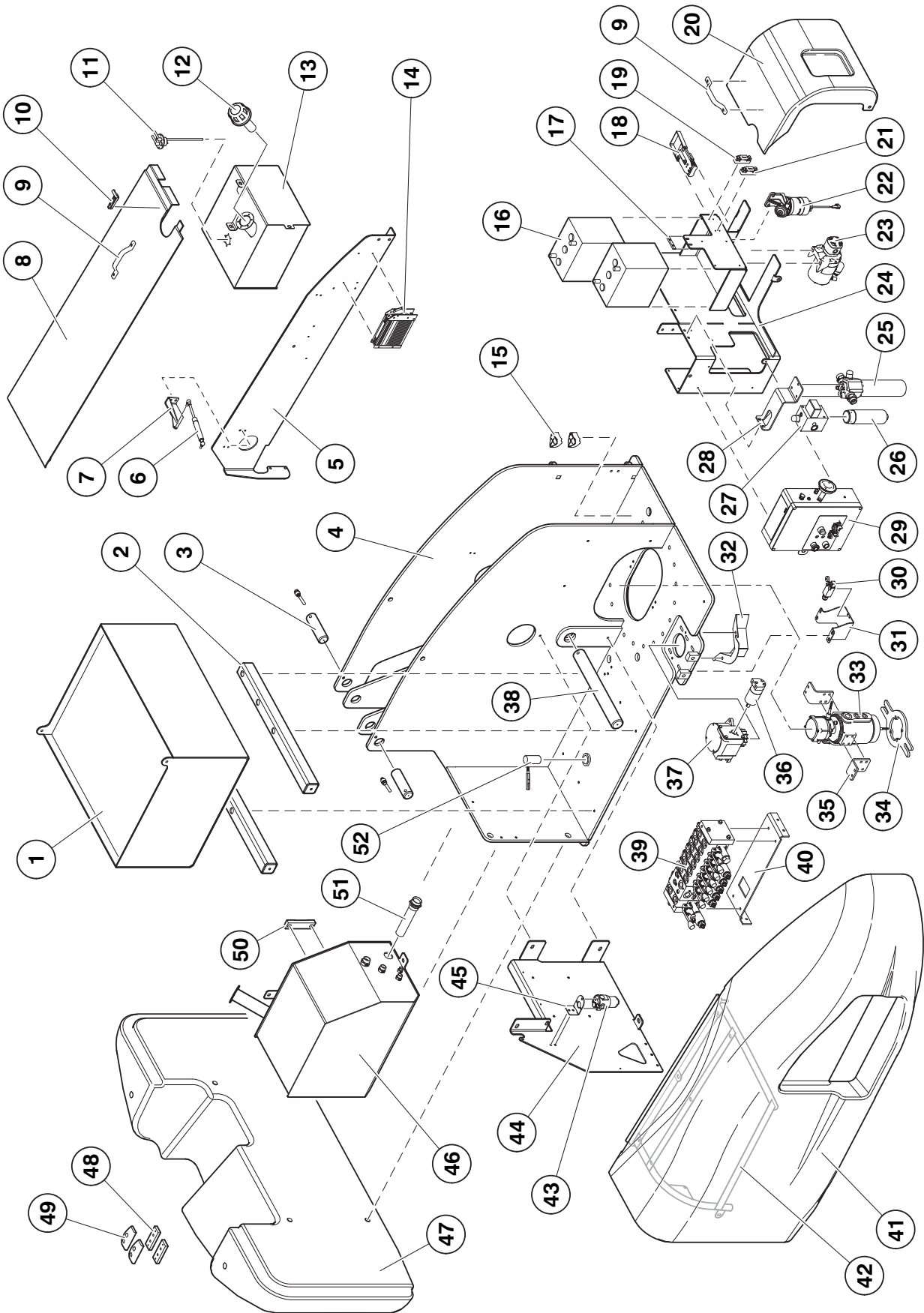
Item	Description				Part Number
26	Pressure filter bowl Element ONLY				P23276 P24944
27	Boom enable valve Indicator - 5 bar				P24881 P24945
28	Bracket				P25197
29	Base control assembly				P25162
30	Microswitch				P19118
31	Bracket				P25611
32	Guard - Slew				P23395
33	Swivel joint				P22695
34	Plate				P22924
35	Foot - for item 33				P22923
36	Motor				P15686
37	Gearbox				P15672
38	Pin - 500mm				P24054
39	Valve - Main con- trols				P22411
40	Bracket				P25201
41	Canopy - LH				P23032
42	Support bracket LH				P24556
43	Pressure filter Element * 3 micron 10 micron				P26267 P26272 P26273
44	Bracket - Main side				P25202
45	Bracket				P26326
46	Hydraulic tank				P25152
47	Counter weight				P21297
48	Spacer				P16883
49	Rubber pad				P16877
50	Gauge				P13253
51	Suction strainer				P20994

french  
german  
spanish

superstructure



52	Locking pin - Slew Handle				P25587 P23809
----	---------------------------	--	--	--	------------------



french  
german  
spanish

**superstructure**

**Figure 2.2 Superstructure assembly (Diesel - Part 1)**

## 2.3 superstructure assembly - hybrid (engine side)

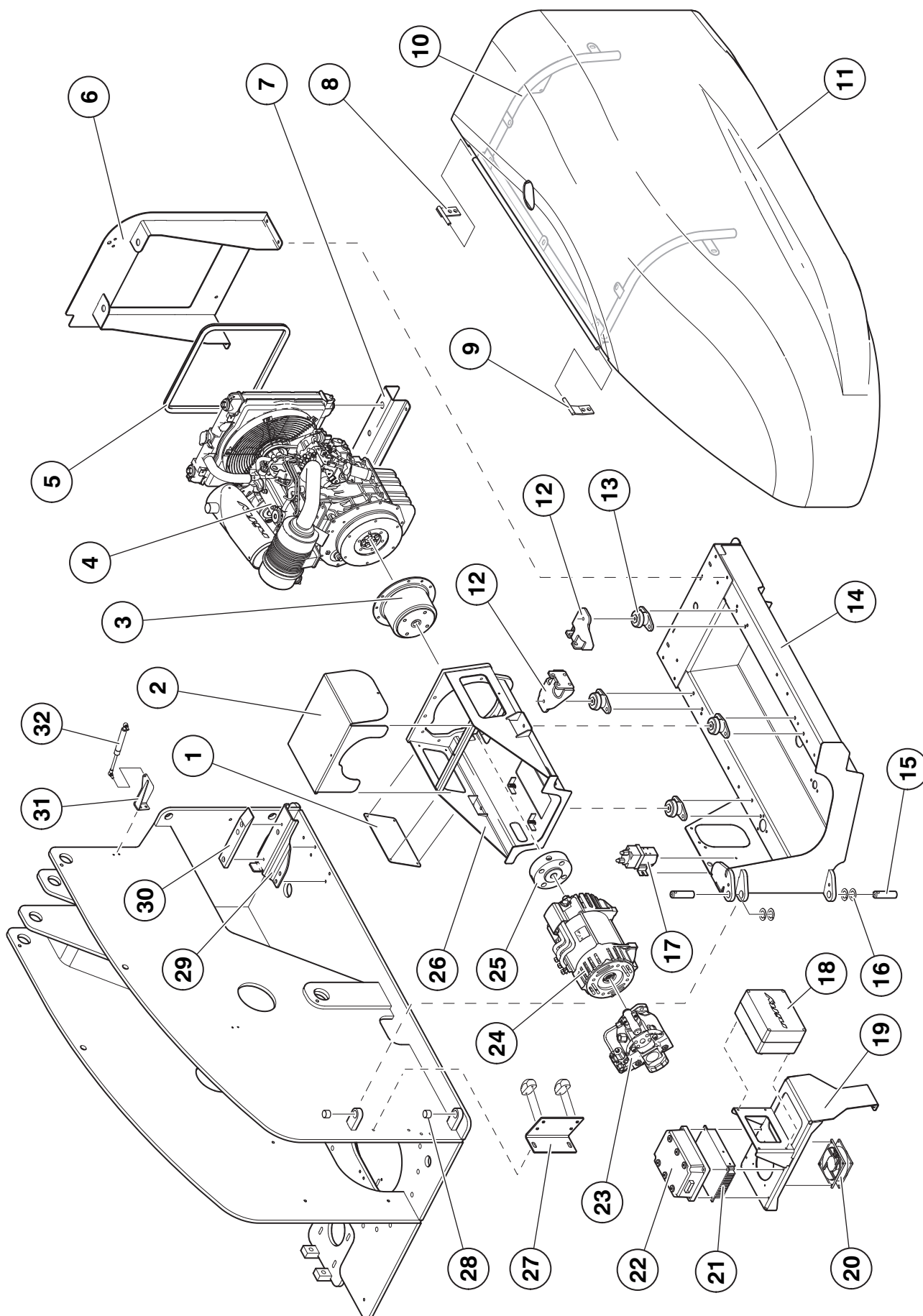
Item	Description	Part Number
1	Guard - Rear	P25598
2	Guard	P24531
3	Centrifugal clutch	P24354
4	Diesel engine	P24288
5	Foam	P25665
6	Baffle - Radiator	P24470
7	Support - Radiator	P25443
8	Hinge - Canopy	P18264
9	Hinge - Front	P13361
10	Support bracket RH	P27350
11	Canopy - RH	P26243
12	Bracket - Engine mount	P24481
13	Engine mount	P24466
14	Engine tray	P25002
15	Pin - 91 mm	P12954
16	Washer	P10594
17	Contactor, 72v	P23926
18	Engine box assy.	P26536
19	Support Bracket - Motor controller	P25444
20	Fan assembly	P23157
21	Heatsink	P20490
22	Motor controller	P27959
23	Pump	P23453
24	Electric motor	P22187
25	Coupling - clutch	P24919
26	Cradle - Motor	P24920
27	Stop bracket Rubber buffer	P26683 P16982
28	Bush	P10032
29	Support	P25157
30	Wear pad	P25158

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<b>31</b>	Bracket - Gas strut				<b>P25723</b>
<b>32</b>	Gas strut				<b>P16953</b>



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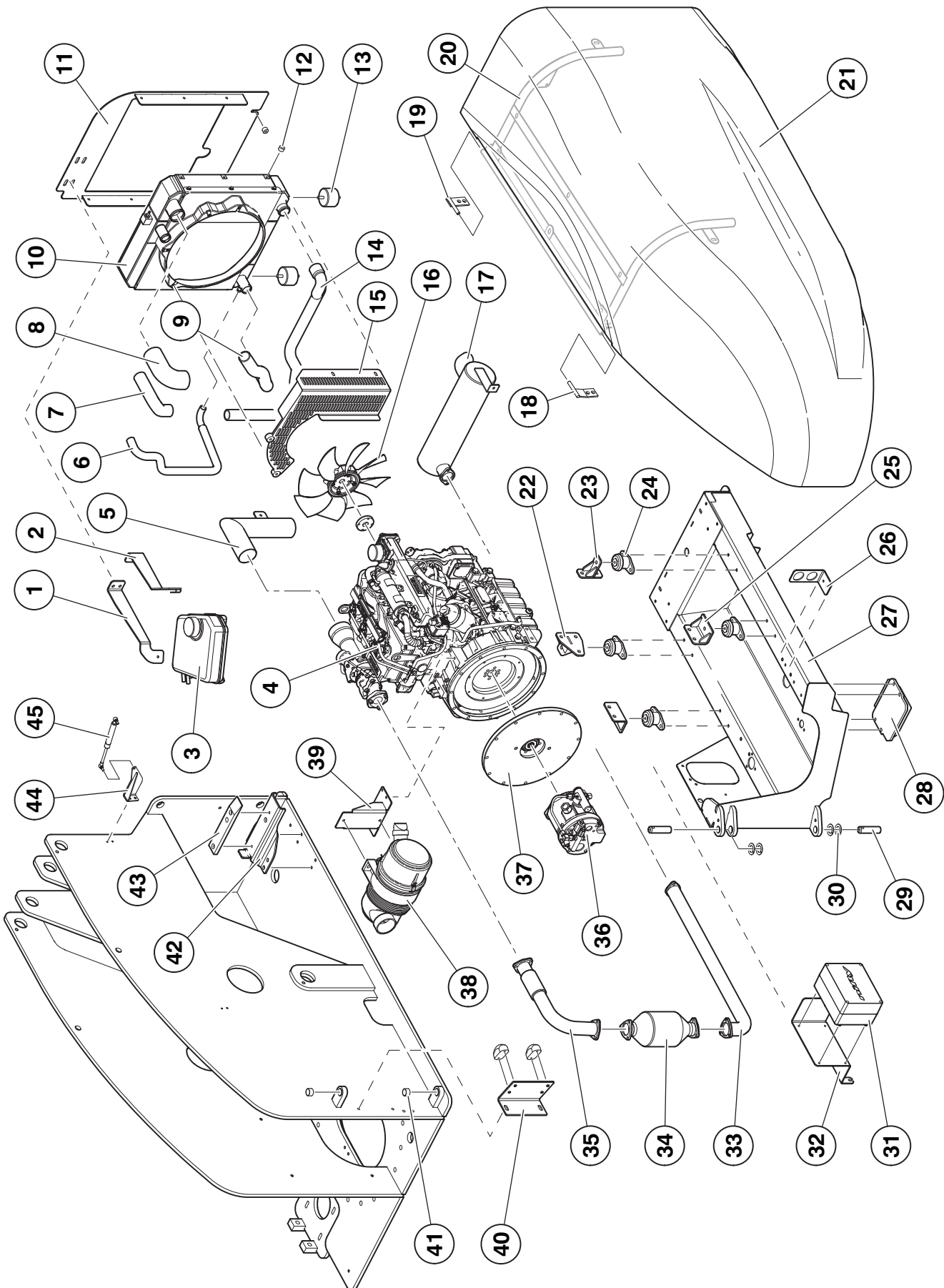
**Figure 2.3 Superstructure assembly (Hybrid - part 2)**

## 2.4 superstructure assembly - diesel (engine side)

Item	Description	Part Number
1	Bracket LH	P27343
2	Bracket RH	P27344
3	Expansion tank	P27347
4	Diesel engine See "Diesel engine (Diesel)" on page 2-18.	P24860
5	Air intake tube	P25728
6	Fill hose - Radiator	P27717
7	Top hose	P25092
8	Air inlet hose - Top	P25094
9	Bottom hose	P25093
10	Radiator assembly	P25000
11	Baffle	P25159
12	Mount - Baffle	P25414
13	Mount - Radiator	P25413
14	Air outlet hose - Bottom	P25095
15	Guard - Fan	P25939
16	Fan assembly Spacer	P25233 P25893
17	Silencer	P25001
18	Hinge - Front	P13361
19	Hinge - Canopy	P18264
20	Support bracket RH	P27350
21	Canopy - RH	P27310
22	Bracket - inner front	P25910
23	Bracket - Front	P25004
24	Engine mount	P14484
25	Bracket - Rear	P25007
26	Bracket - Electrics	P25377
27	Engine tray	P25002

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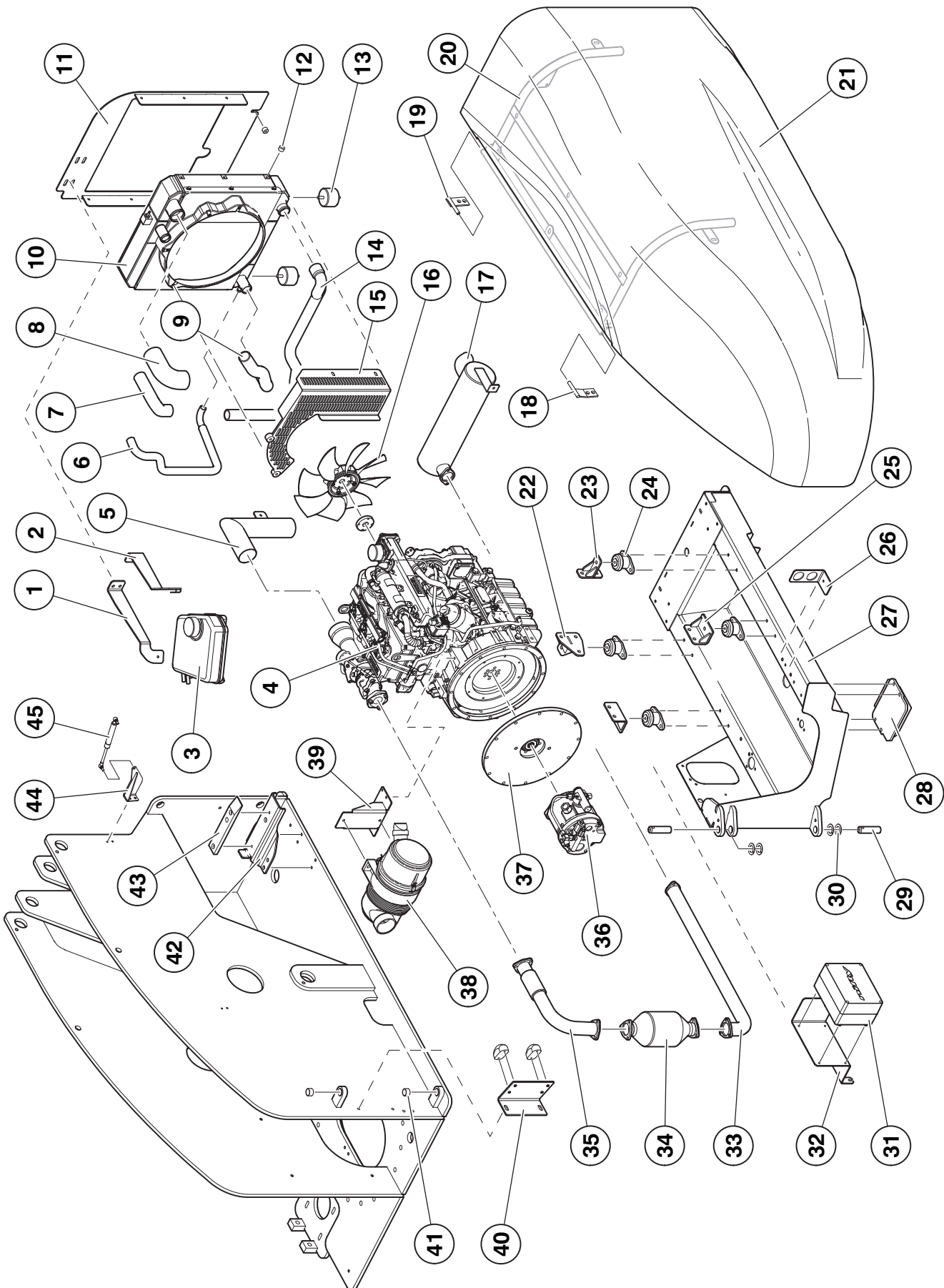
**Figure 2.4 Superstructure assembly (Diesel - part 2)**

## 2.4 continued

Item	Description				Part Number
28	ECU				P25022
29	Pin - 91 mm				P12954
30	Washer				P10594
31	Engine box				P25313
32	Bracket				P25368
33	Exhaust - Section 3				P25062
34	Catalytic converter				P24999
35	Exhaust - Section 2				P25060
36	Pump				P24849
37	Bell housing plate/ coupling				P25016
38	Air cleaner Filter - Outer Filter - Inner				P25083 P27136 P27137
39	Bracket - Air cleaner				P25081
40	Stop bracket Rubber buffer				P26683 P16982
41	Bush				P10032
42	Support				P25157
43	Wear pad				P25158
44	Bracket - Gas strut				P25723
45	Gas strut				P16953

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**Figure 2.4 Superstructure assembly (Diesel - part 2)**

## 2.5 Diesel engine (Hybrid)

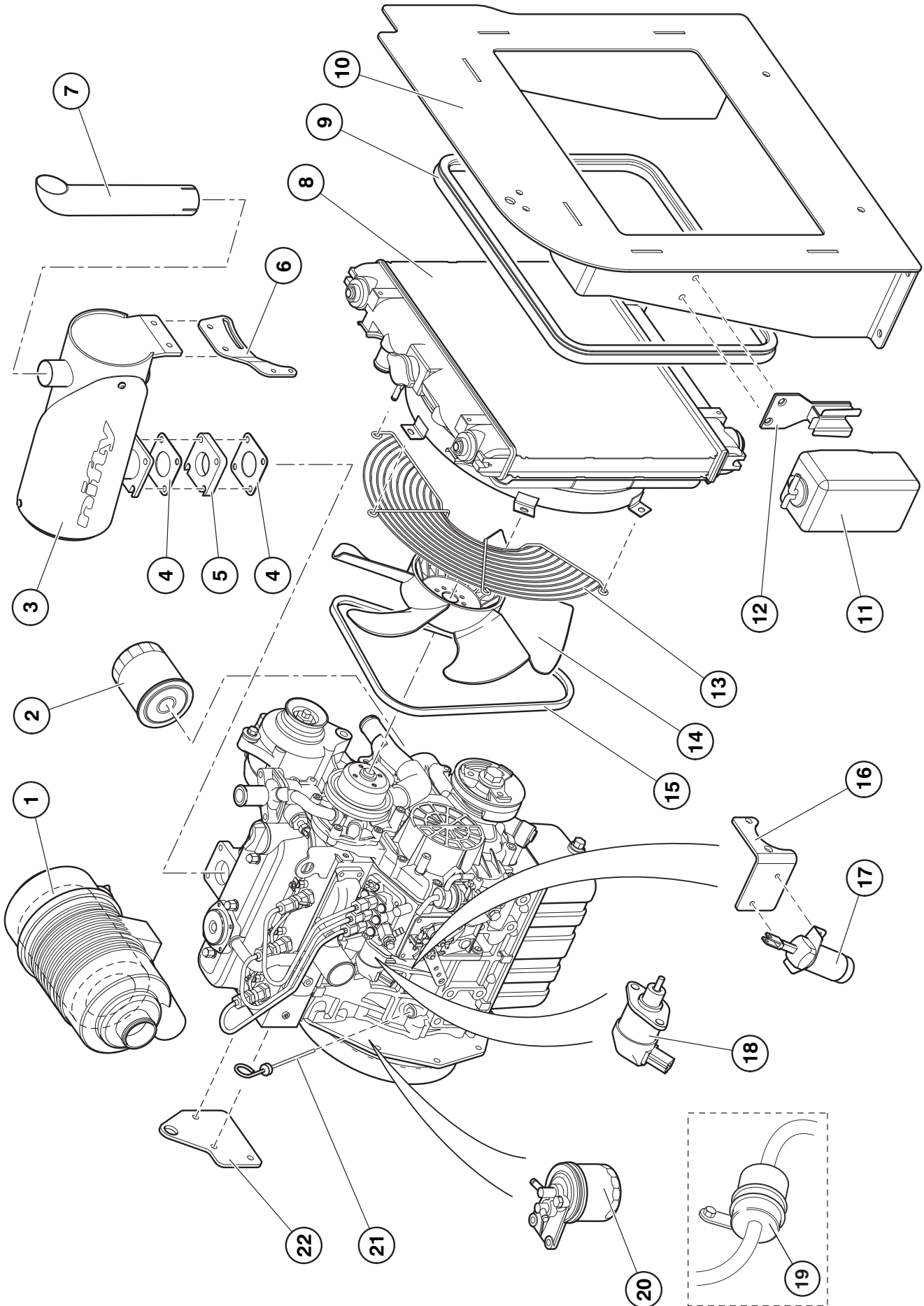
Item	Description	Part Number
	D1105 engine	P24288
1	Air filter element	P25599
2	Oil Filter	P26602
3	Exhaust assembly Heat shield ONLY	P21357 P22339
4	Gasket	P13282
5	Spacer	P24479
6	Bracket	P24570
7	Exhaust pipe	P25620
8	Radiator assembly	P25337
9	Foam	P25665
10	Engine baffle	P24470
11	Expansion bottle Filler cap ONLY	P19270 P24941
12	Bracket for item 11	P19258
13	Fan guard	P25335
14	Fan assembly (6 blade)	P25338
15	V-belt	P13281
16	Bracket for item 17	P24802
17	Throttle solenoid Clevis end *	P18796 P14284
18	Stop solenoid	P26442
19	In-line fuel filter	P24963
20	Fuel filter cartridge	P15251
21	Dip stick	P25336
22	Bracket	P25008

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**Figure 2.5 Diesel engine (Hybrid)**

## 2.6 Diesel engine (Diesel)

Item	Description				Part Number
	Kohler engine				<b>P24860</b>
<b>1</b>	Flange - Exhaust				<b>P27138</b>
<b>2</b>	Fan belt				<b>P27135</b>
<b>3</b>	Washer - sump plug				<b>P27134</b>
<b>4</b>	Oil filter				<b>P27131</b>
<b>5</b>	Air filter - Outer				<b>P27136</b>
<b>6</b>	Air filter - Inner				<b>P27137</b>

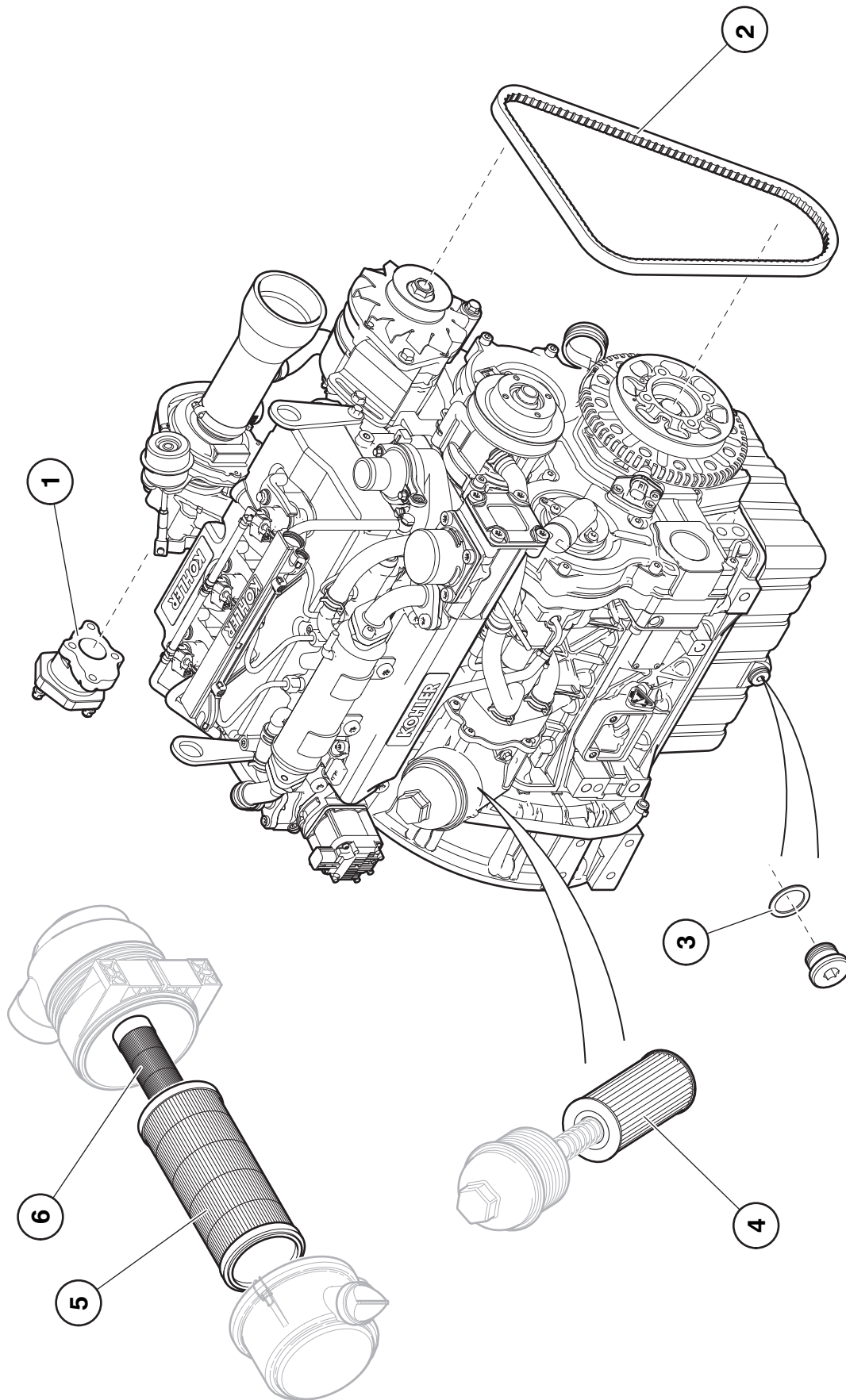
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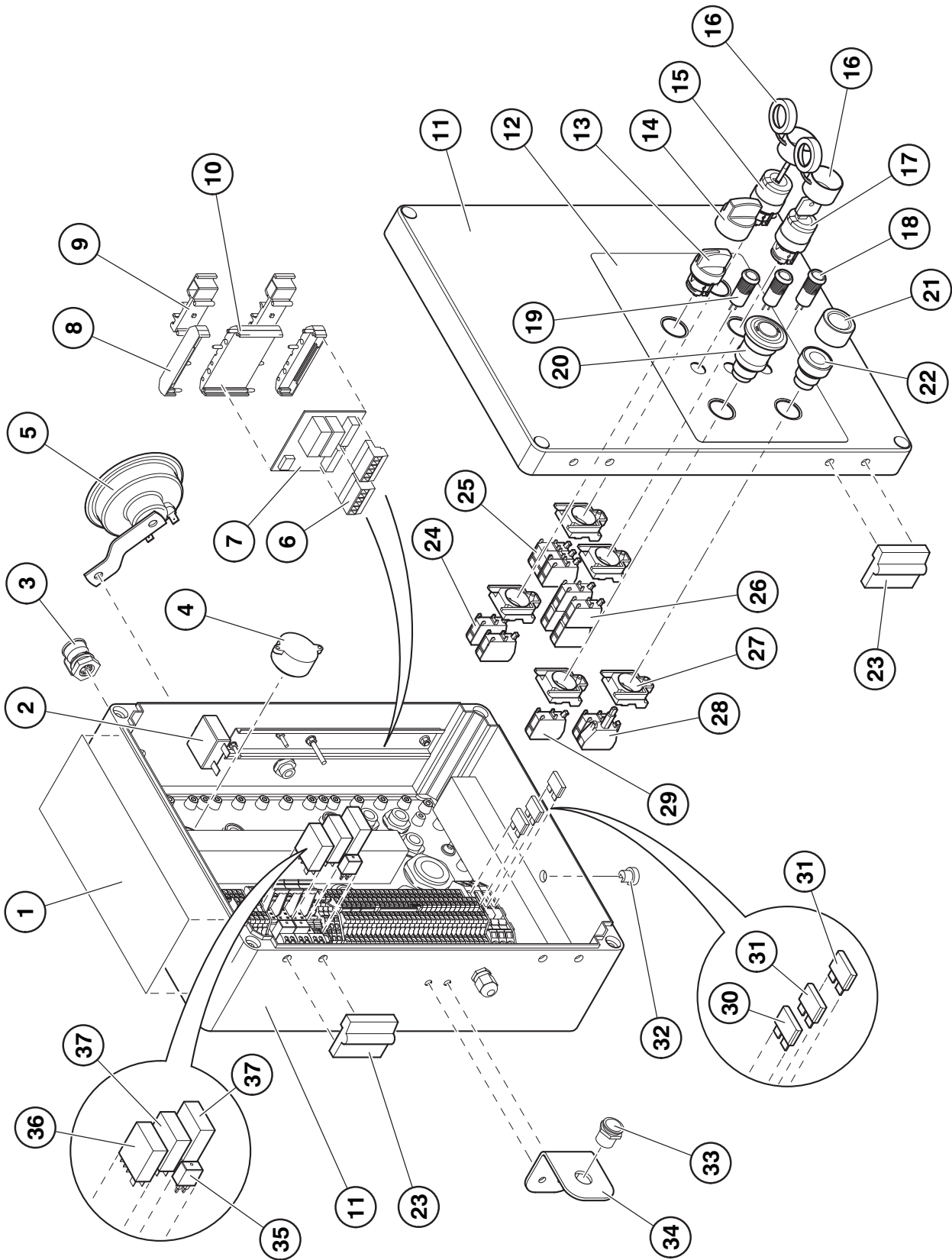
**Figure 2.6 Diesel engine (Diesel)**

## 2.7 Base control assembly

Item	Description				Part Number
1	Label				P24822
2	Circuit breaker 15A				P11050
3	Plug - 7 way Nut Wire Seal				P21928 P23461 P21931
4	Sounder				P26854
5	Horn				P14359
6	Connector				P12942
7	PCB - Safety				P25819
8	Side Carrier - PCB				P21914
9	Carrier foot				P21917
10	Base Carrier - PCB				P21916
11	Box - Machined				P24494
12	Label				P25155
13	Selector switch				P24327
14	Waterproof cover				P24319
15	Keypad (2 position)				P24337
16	Waterproof cover				P24321
17	Keypad (3 position)				P24320
18	LED - Green				P24424
19	LED - Red				P24426
20	E-Stop button USA Only				P24317 P28564
21	Waterproof cover				P24332
22	Green button (Includes item 21)				P24333
23	Hinges (Pair)				P24998
24	Contact - NO (2 off)				P24323
25	Contact - NO (2 off) NC (1 off)				P24323 P24324

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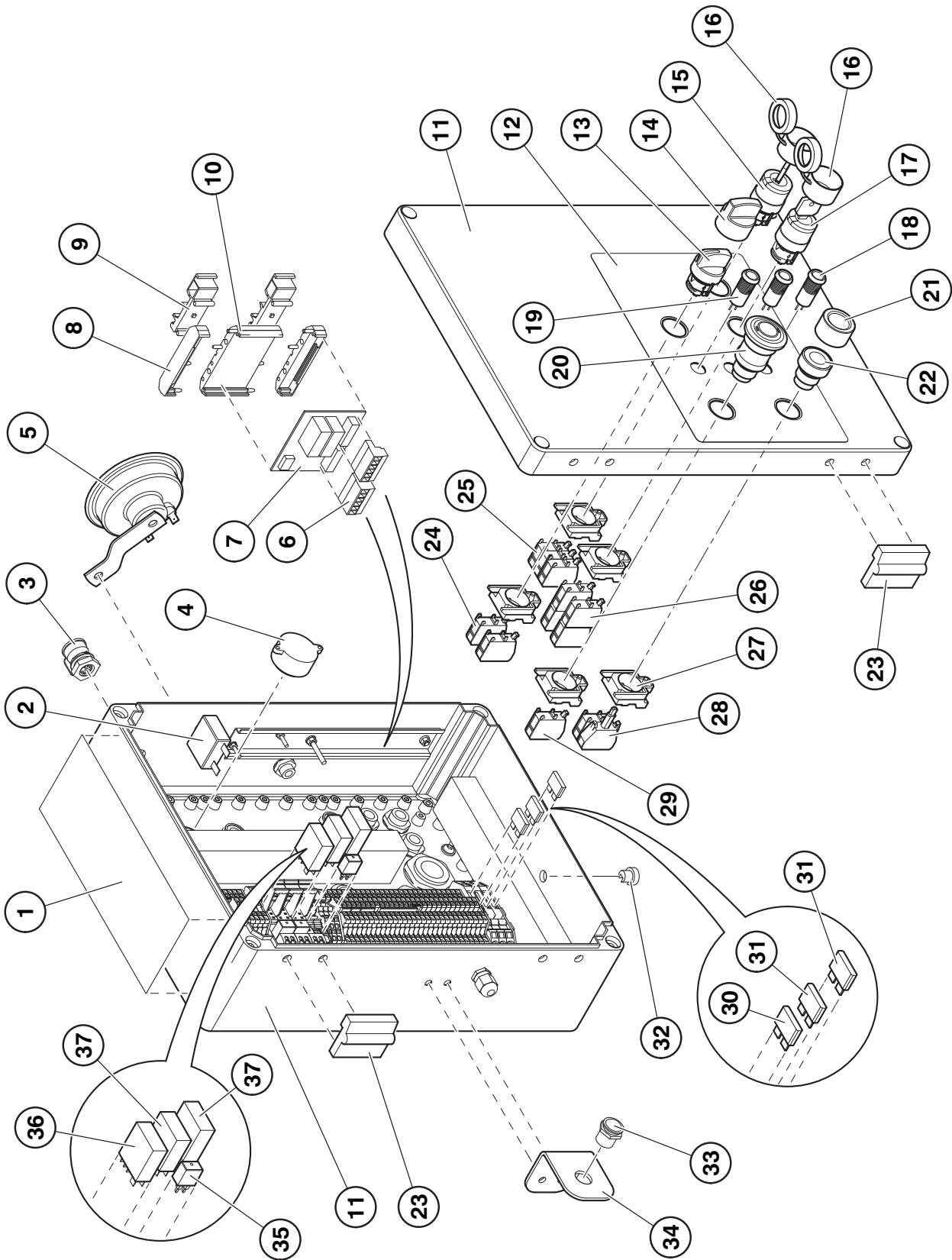
**Figure 2.7 Base control assembly**

## 2.6 continued

Item	Description				Part Number
26	Contact - NO (2 off) NC (2 off)				P24323 P24324
27	Base mount				P24322
28	Contact - NO (1 off) LED block - green				P24323 P24338
29	Contact - NC				P24324
30	Fuse, Blade - 2A				P22192
31	Fuse, Blade - 15A				P22193
32	Drain plug				P23737
33	Button - Powered descent				P25210
34	Bracket				P22002
35	Indicator - Relay				P25857
36	Relay - 8A				P24604
37	Relay - 16A				P21158

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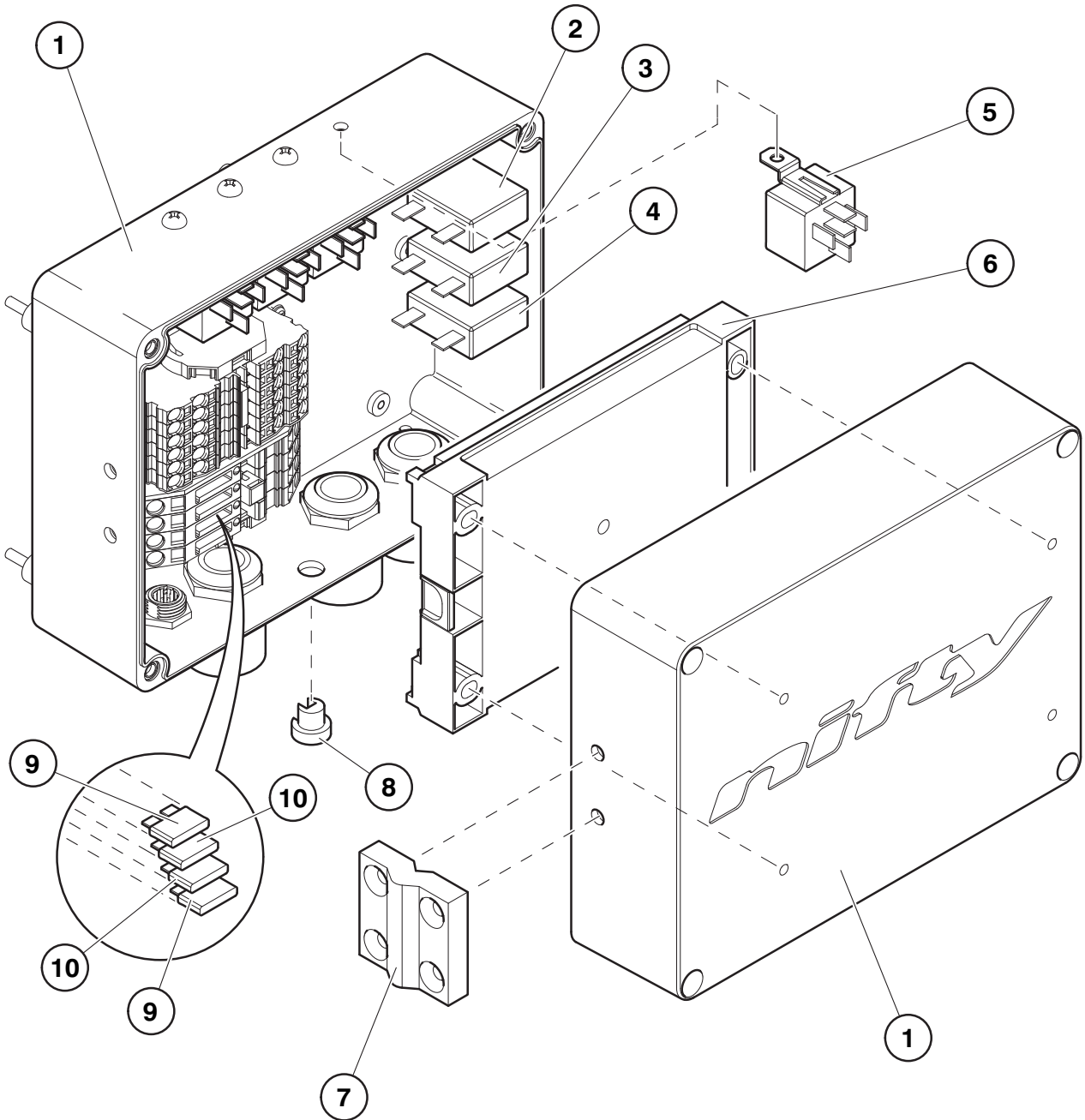
**Figure 2.6 Base control assembly**

## 2.8 Engine box assembly (Hybrid)

Item	Description				Part Number
	Complete assembly				<b>P26536</b>
<b>1</b>	Box and lid				<b>P26534</b>
<b>2</b>	Circuit breaker <b>35A</b>				<b>P13529</b>
<b>3</b>	Circuit breaker <b>15A</b>				<b>P11050</b>
<b>4</b>	Circuit breaker <b>10A</b>				<b>P11719</b>
<b>5</b>	Relay				<b>P10340</b>
<b>6</b>	Controller				<b>P24789</b>
<b>7</b>	Hinge				<b>P23377</b>
<b>8</b>	Drain plug				<b>P23737</b>
<b>9</b>	Fuse, Blade - 3A				<b>P24876</b>
<b>10</b>	Fuse, Blade - 15A				<b>P22193</b>

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## 2.9 Engine box assembly (Diesel)

Item	Description	Part Number
	Complete assembly	P25313
1	Box and lid	P25311
2	Circuit breaker 3A	P25219
3	Circuit breaker 5A	P23167
4	Circuit breaker 15A	P11050
5	Circuit breaker 20A	P25320
6	Relay	P10340
7	Controller	P24789
8	Label - LED's	P26491
9	LED - Red	P24426
10	LED - Yellow	P24425
11	LED - Green	P24424
12	Hinge	P23377
13	Drain plug	P23737
14	Fuse, Blade - 3A	P24876
15	Fuse, Blade - 15A	P22193

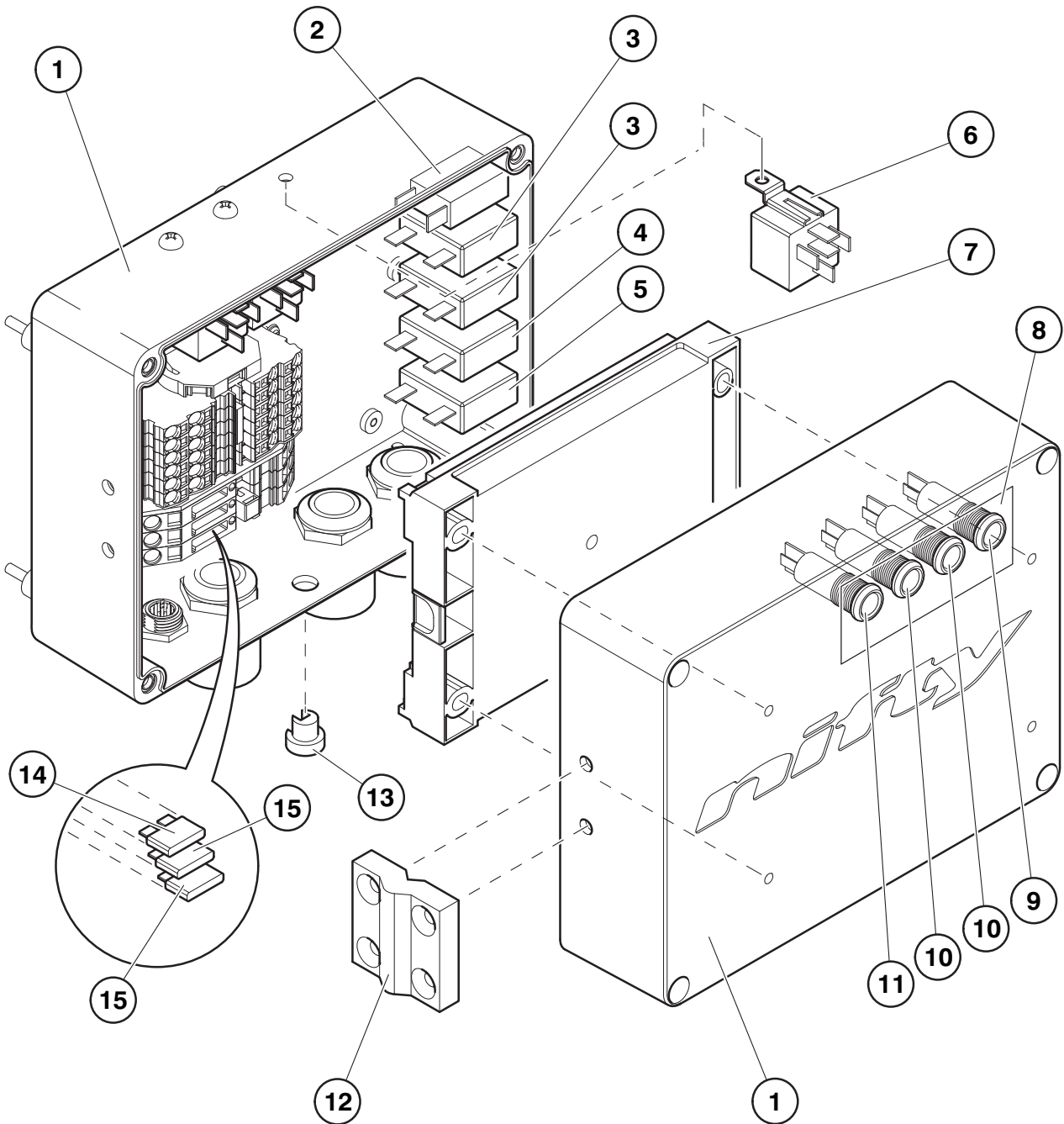
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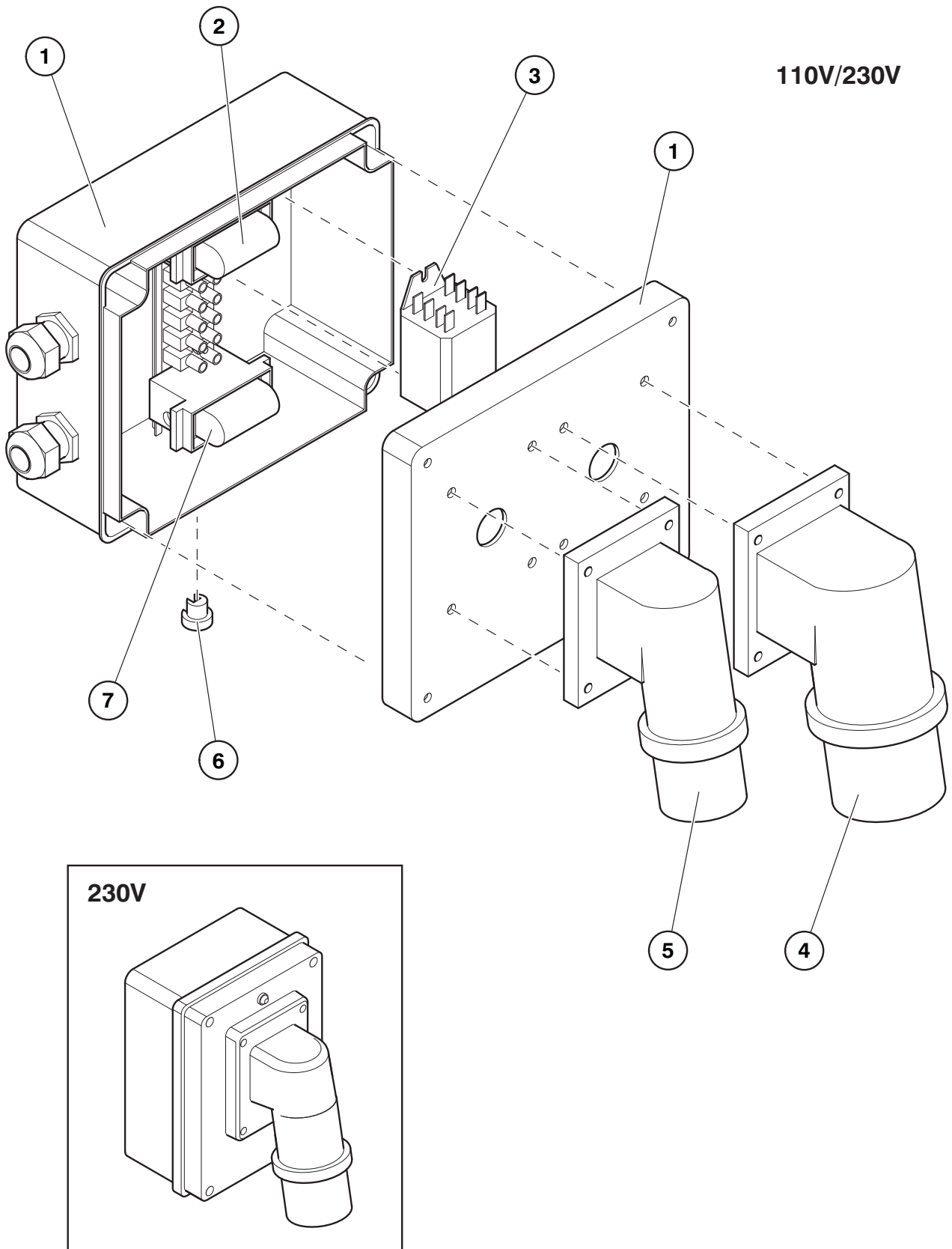
**Figure 2.9 Engine box assembly (Diesel)**

## 2.10 Charger inlet assembly (Hybrid)

Item	Description				Part Number
	Complete assembly 110V/230V 230V				P26960 P26961
1	Box and lid				P26258
2	Fuse 16A Fuse holder				P26262 P26159
3	Relay				P20767
4	Inlet socket 32A				P24702
5	Inlet socket 16A				P23870
6	Drain plug				P23737
7	Fuse 25A Fuse holder				P26261 P26159

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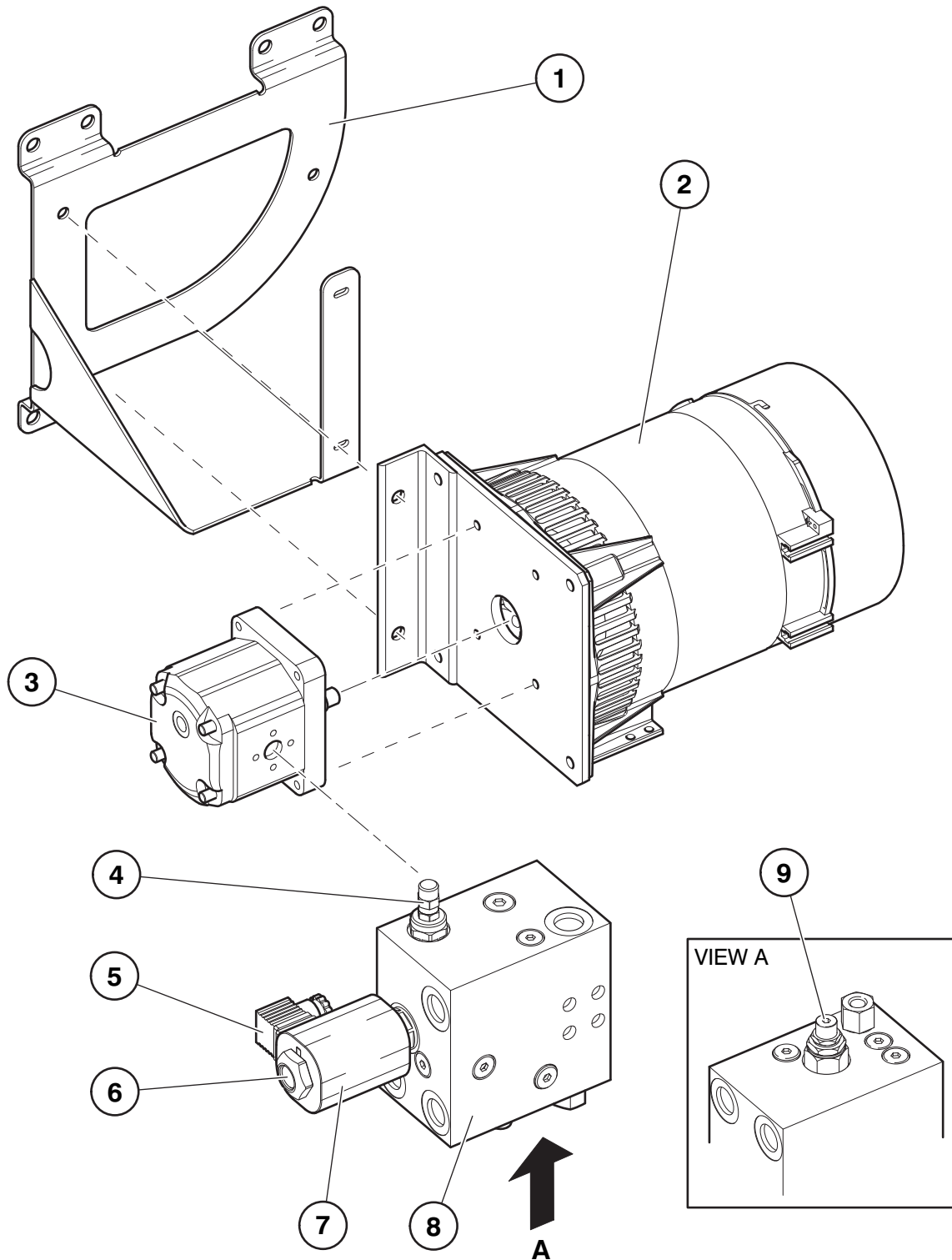
**Figure 2.10** Charger inlet assembly

## 2.11 Generator assembly (Option)

Item	Description				Part Number
	Complete assembly (Items 2 to 9)				<b>P22711</b>
<b>1</b>	Mounting bracket				<b>P26502</b>
<b>2</b>	Generator - 3.5 kW				<b>P27611</b>
<b>3</b>	Pump				<b>P27613</b>
<b>4</b>	Flow control valve				<b>P27618</b>
<b>5</b>	Connector plug				<b>P27616</b>
<b>6</b>	Solenoid valve				<b>P27614</b>
<b>7</b>	Coil				<b>P27615</b>
<b>8</b>	Valve block				<b>P27612</b>
<b>9</b>	Pressure relief valve				<b>P27617</b>

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**Figure 2.11 Generator assembly**





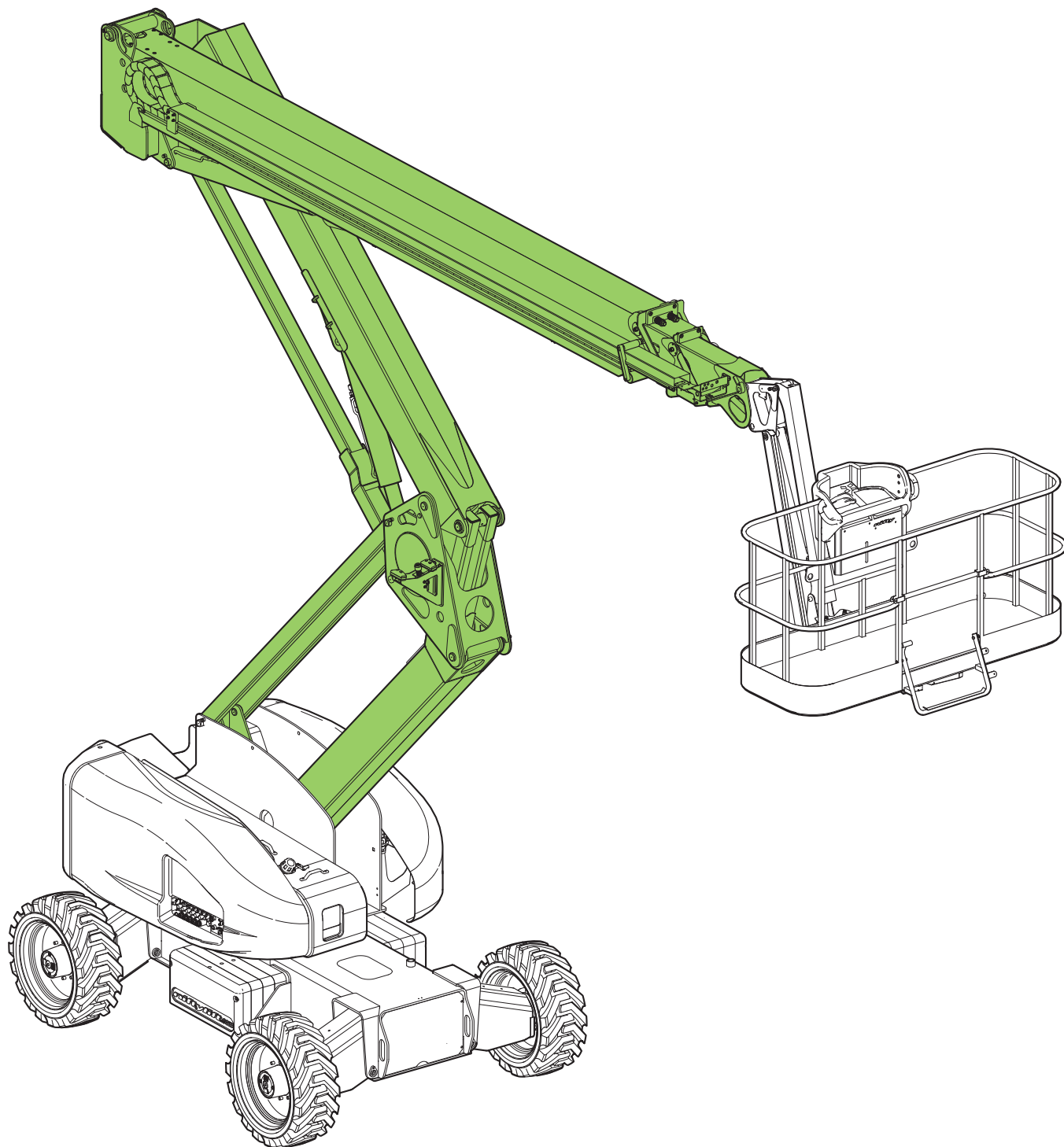
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## 3.1 links assembly

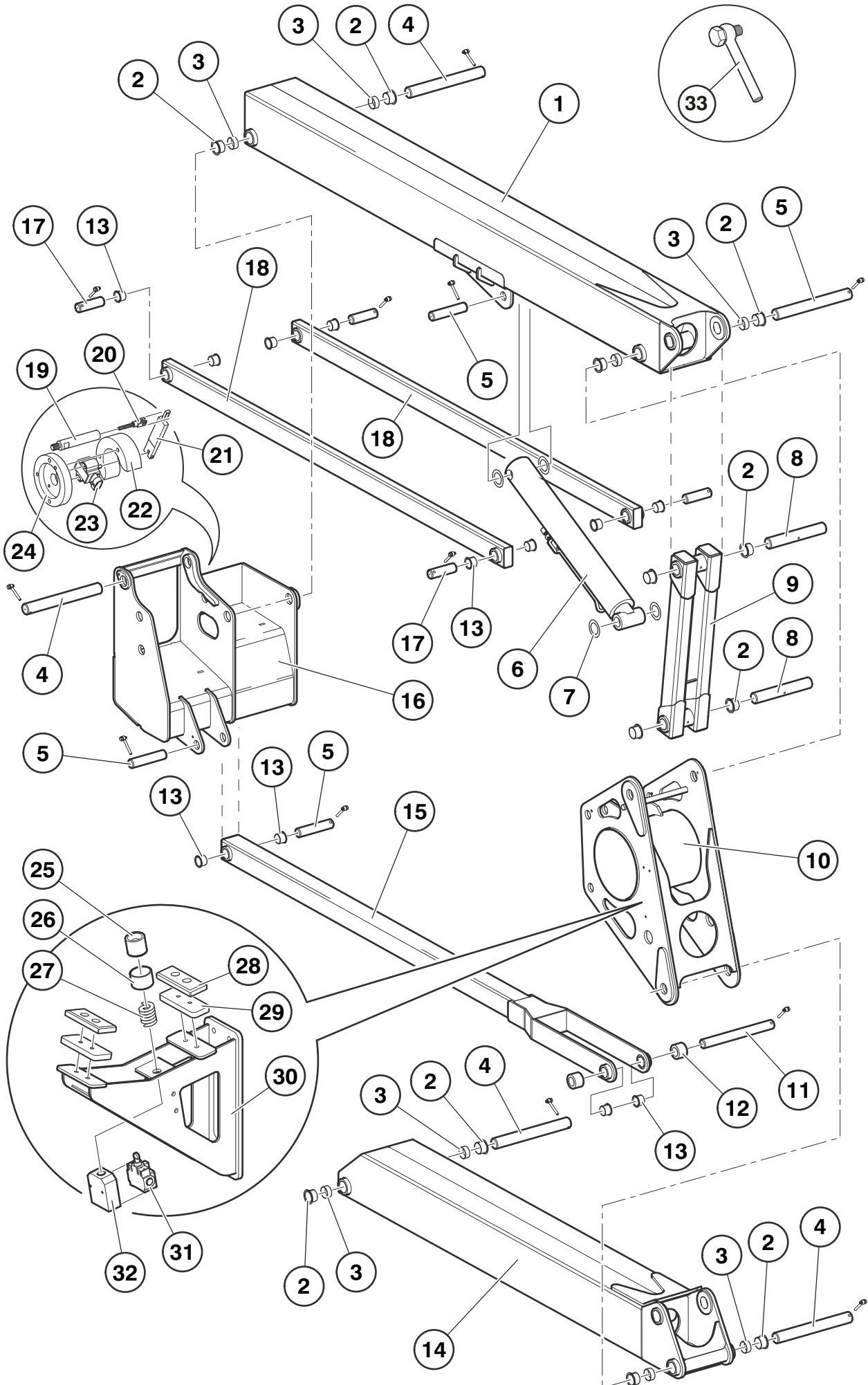
Item	Description				Part Number
1	Link 4				P26556
2	Bush				P24063
3	Bush				P25641
4	Pin - 500 mm				P24054
5	Pin - 227 mm				P24058
6	Cylinder - Lift Seal kit * <i>See "Lift/Luffing cylinder" on page 3-14.</i>				P25955 P26181
7	Washer				P25838
8	Pin - 375 mm				P24055
9	Push rod				P22952
10	Knuckle				P22950
11	Pin - 470 mm				P24057
12	Spacer				P24061
13	Bush				P24062
14	Link 1				P22946
15	Link 3				P22948
16	Tele-knuckle				P23031
17	Pin - 165 mm				P24056
18	Link 2				P22947
19	Extension bar				P25533
20	Clevis end				P14284
21	Arm - Level switch				P25532
22	Cover				P25531
23	Sensor				P26064
24	Mounting plate				P25546

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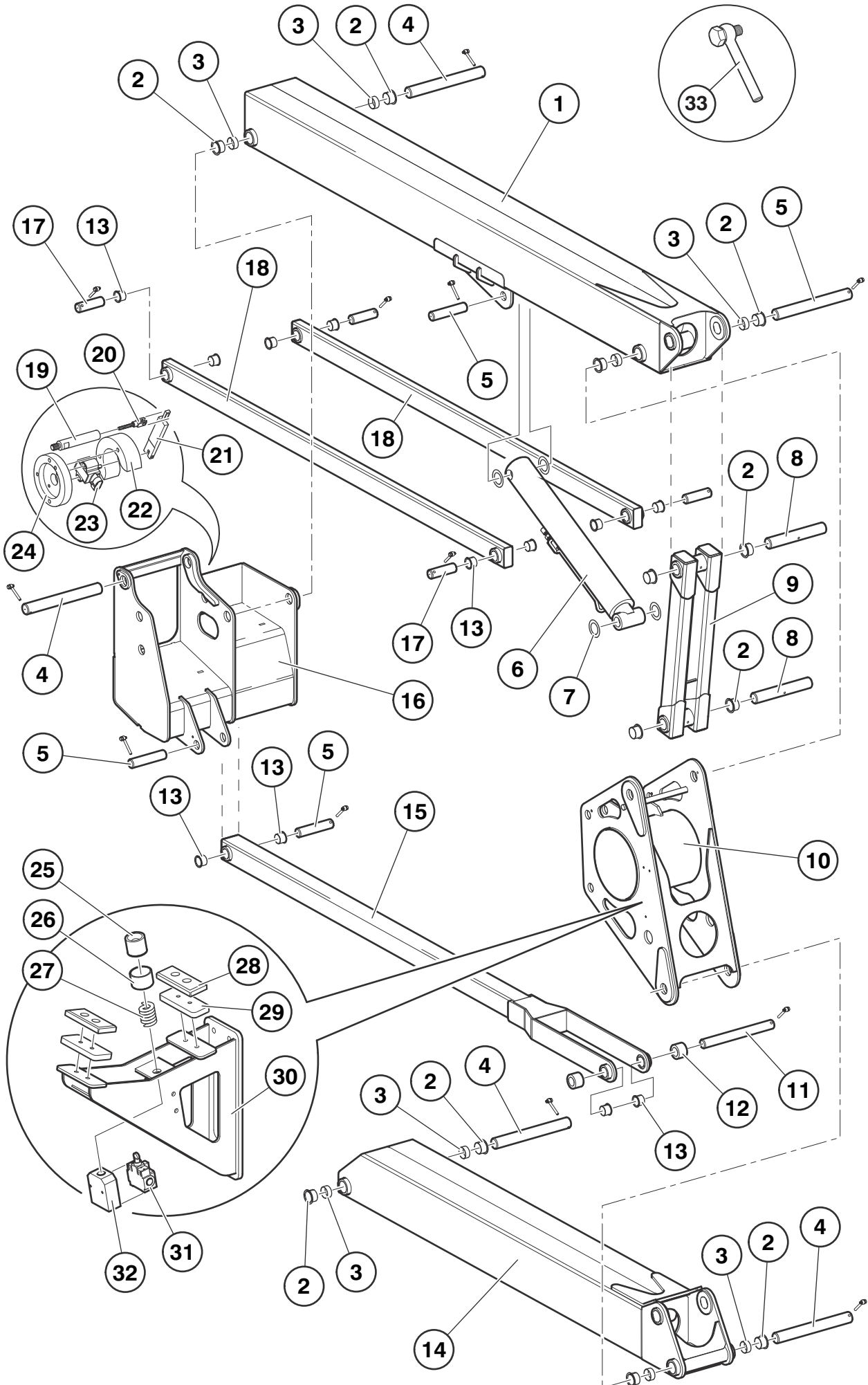
**Figure 3.1 Links assembly**

## 3.1 continued

Item	Description				Part Number
25	Rubber cap				P18554
26	Nylon spacer				P11607
27	Spring				P13372
28	Pad - Boom rest				P27526
29	Spacer				P16883
30	Bracket - Boom rest				P24712
31	Microswitch				P18937
32	Block				P13309
33	Swing bolt				P25215

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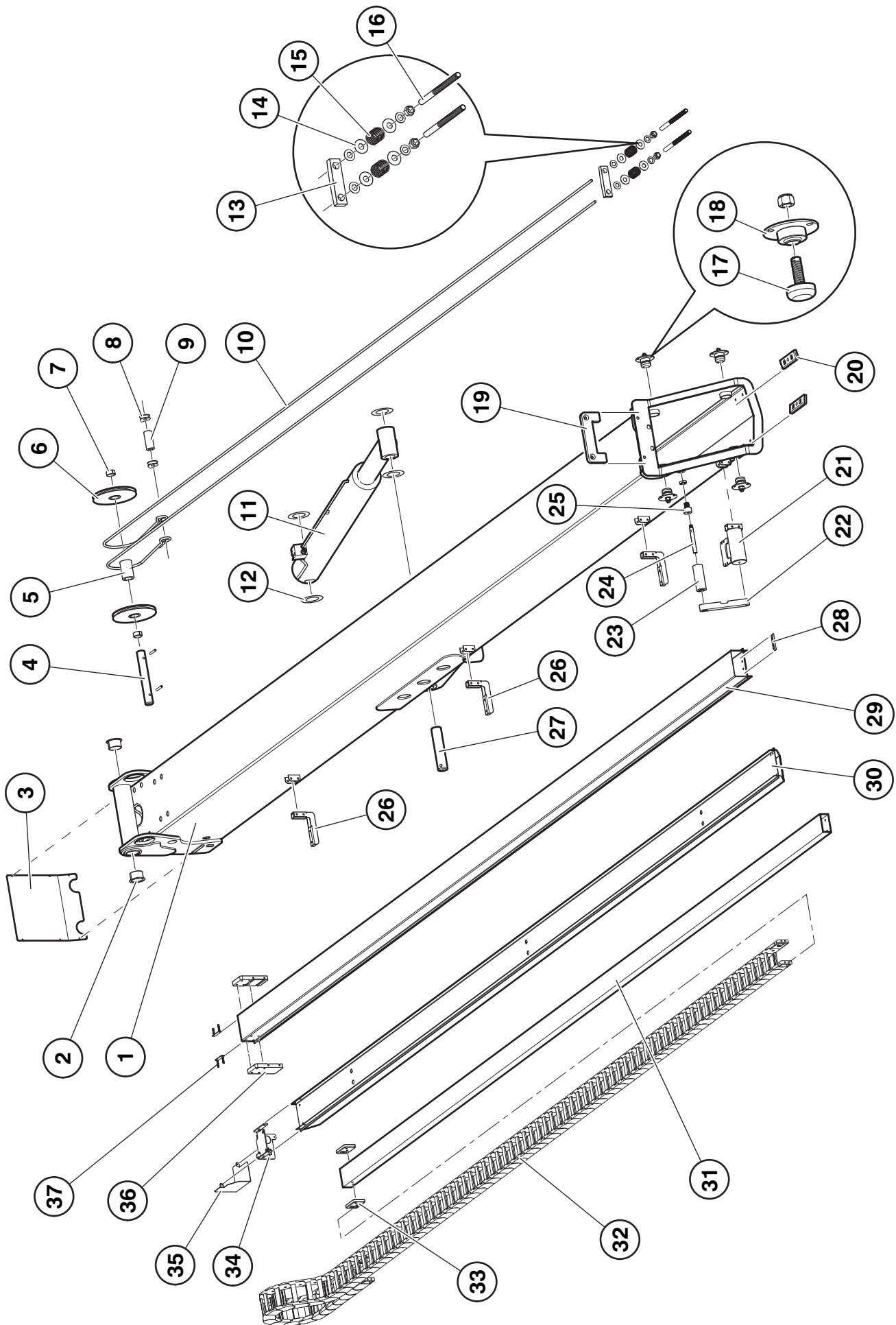


**Figure 3.1 Links assembly**

## 3.2 telescope assembly (part 1)

Item	Description	Part Number
1	Section 4	P23544
2	Bush	P24063
3	Cover	P24603
4	Pin - 286 mm	P22164
5	Spacer	P22225
6	Pulley	P22408
7	Bush	P19648
8	Thimble, solid	P22154
9	Spacer	P22226
10	Wire rope kit -- Return	P22158
11	Cylinder - Luffing Seal kit * <i>See "Lift/Luffing cylinder" on page 3-14.</i>	P21443 P26181
12	Washer	P25838
13	Tension block	P22165
14	Washer, Cup	P26594
15	Spring	P24988
16	Adjuster	P22157
17	Wear screw	P24833
18	Capping plate	P24870
19	Wear pad	P22231
20	Wear pad	P16176
21	Bracket - Bulkhead	P23619
22	Guide plate	P24917
23	Roller - Long	P24678
24	Shoulder - Shaft	P24745
25	Eccentric cam	P24673
26	Support - Trunking	P24940
27	Pin - 227 mm	P24058

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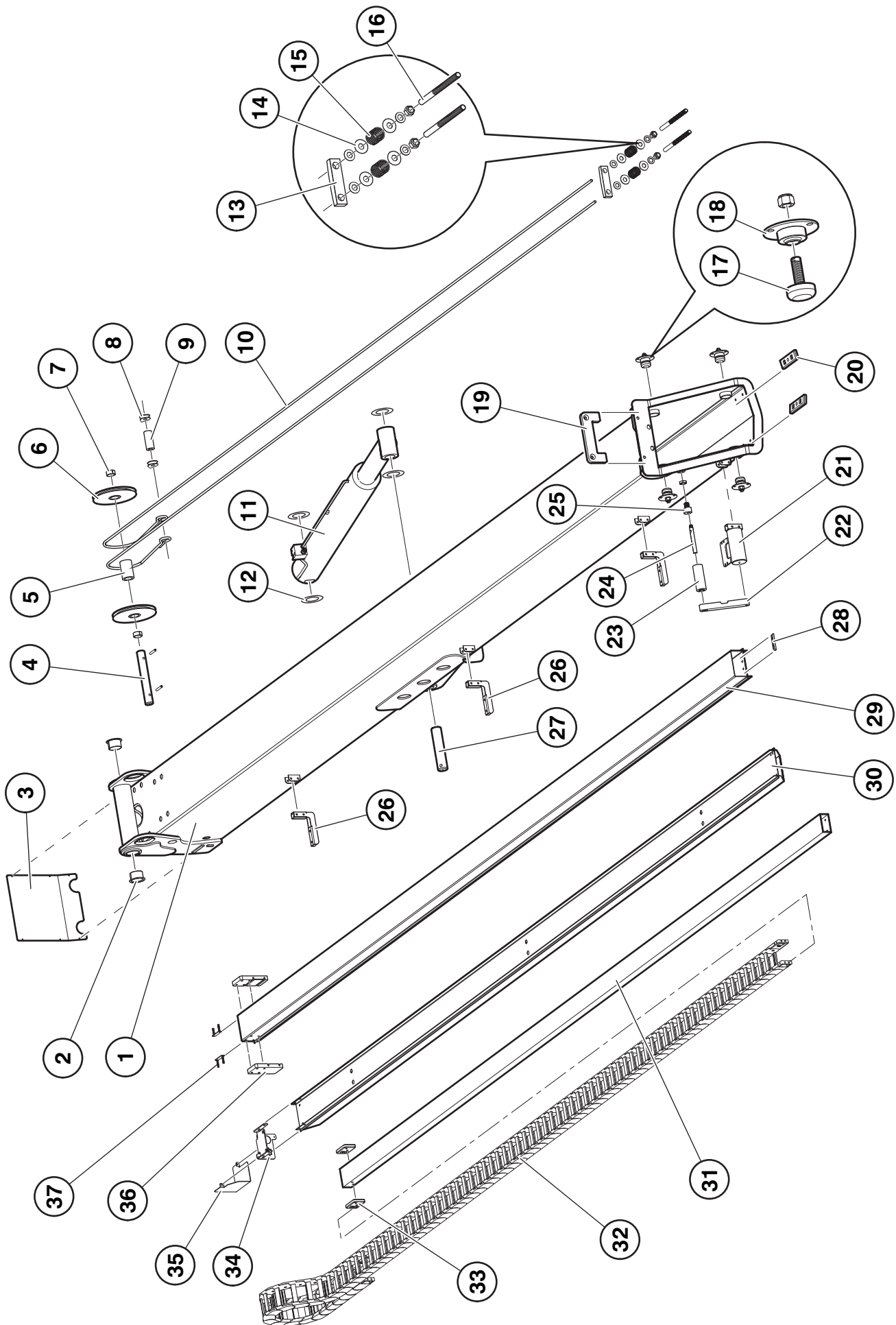
Figure 3.2 telescope assembly (Part 1)

## 3.2 continued

Item	Description				Part Number
28	Wear pad				P15899
29	Trunking - Middle				P24879
30	Trunking - Lower				P24878
31	Trunking - Top				P23614
32	Energy chain See "Energy chain" on page 3-18.				P23913
33	Guide bracket				P24956
34	Bracket - Bulkhead				P24699
35	Cover, Hose burst				P26480
36	Guide bracket				P24913
37	Stud plate				P24613

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Figure 3.2 Telescope assembly (Part 1)



## 3.3 telescope assembly (part 2)

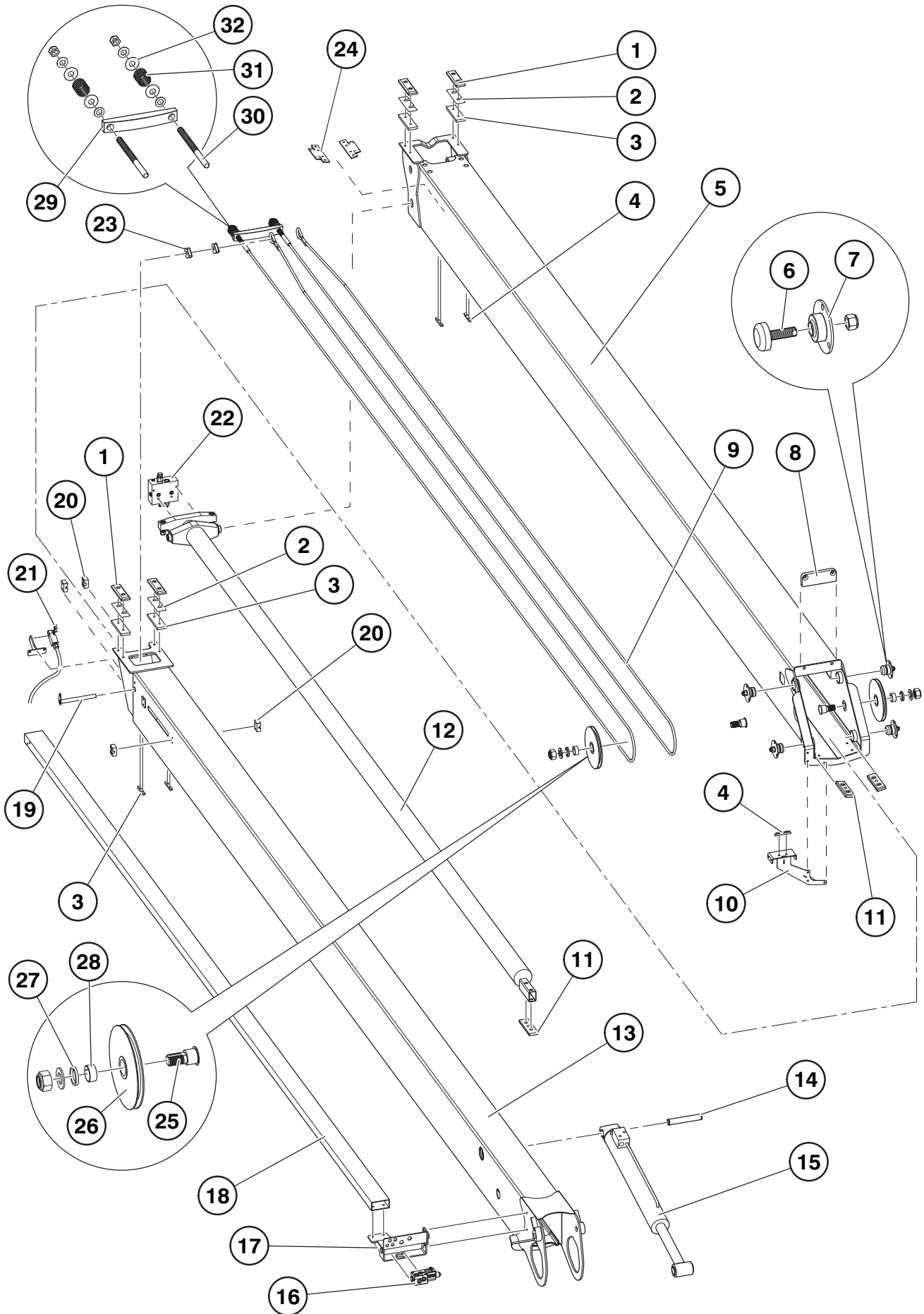
Item	Description	Part Number
1	Wear pad	P22265
2	Shim	P14174
3	Spacer	P22266
4	Wear pad	P15899
5	Section 3	P23543
6	Wear screw	P24833
7	Capping plate	P24870
8	Wear pad	P22234
9	Wire rope kit - Outward	P22115
10	Support - trunking	P24015
11	Wear pad	P16176
12	Tele cylinder Seal Kit *	P21722 P26180
13	Section 2	P23542
14	Pin - 188 mm	P24059
15	Level cylinder Seal kit * <i>See "Levelling cylinder" on page 3-16.</i>	P24955 P18466
16	Valve	P21456
17	Bulkhead bracket	P24704
18	Trunking - Top	P23614
19	Pin - 201 mm	P22227
20	Guide block - Rope	P22477
21	Microswitch Mounting bracket	P19118 P24912
22	Valve - Regen	P22513
23	Thimble, solid	P22154
24	Wear pad	P27222

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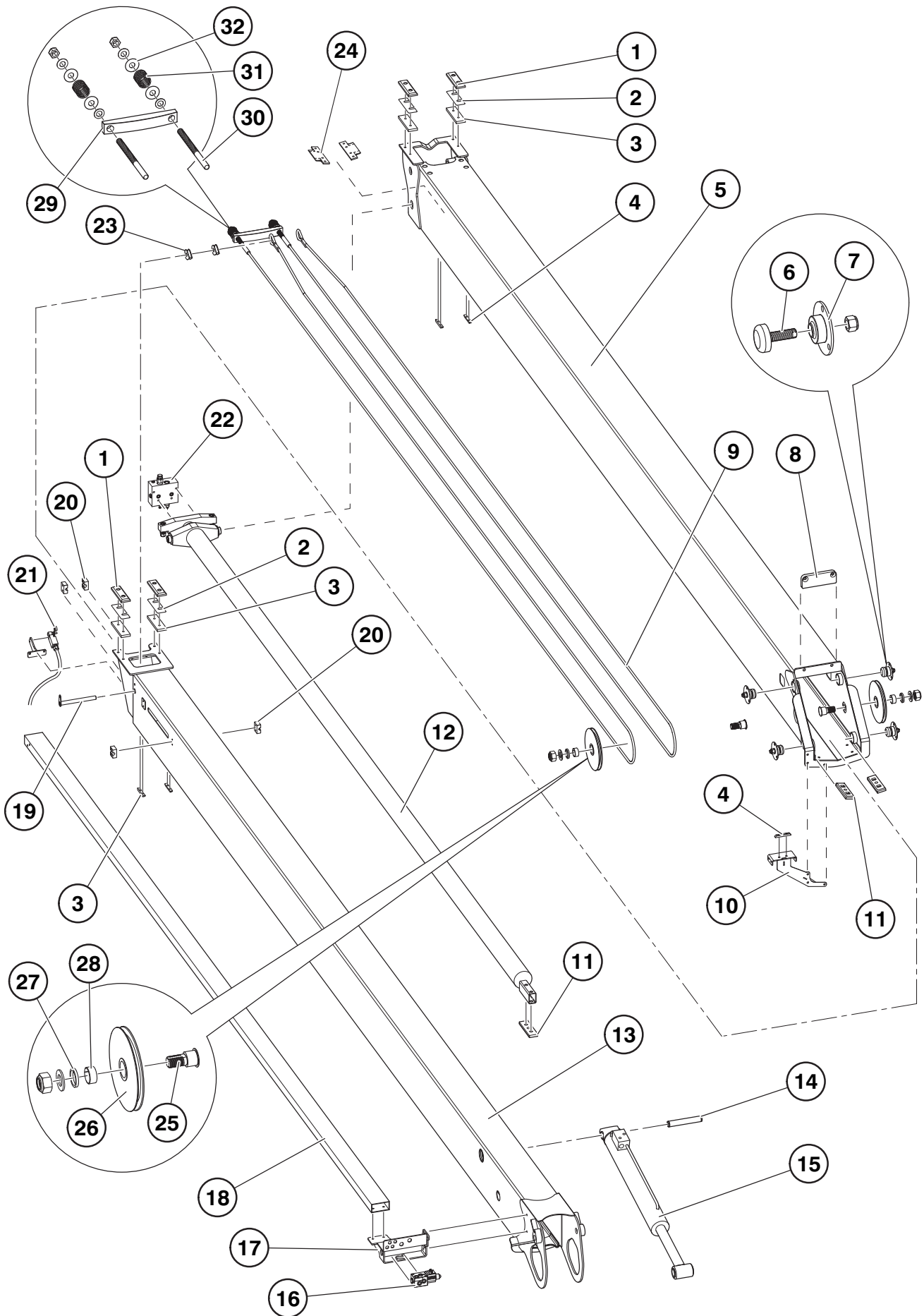
**Figure 3.3 telescope assembly (Part 2)**

**3.3 continued**

Item	Description				Part Number
25	Axle - Pulley				P22406
26	Pulley				P22408
27	Collar				P22407
28	Bush				P19648
29	Tension block				P22221
30	Adjuster				P22157
31	Spring				P24988
32	Washer, Cup				P26594

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**Figure 3.3 telescope assembly (Part 2)**

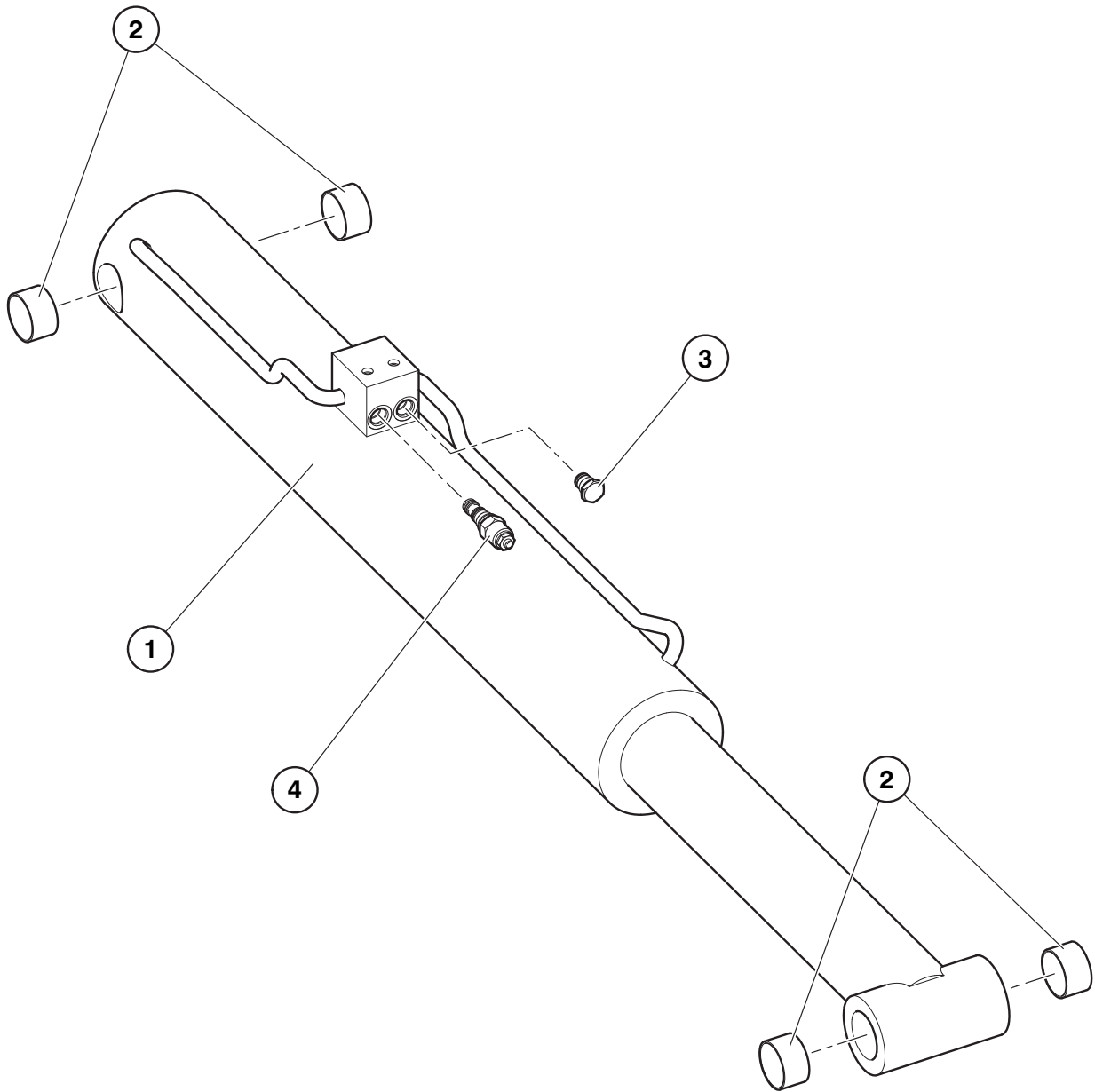
## 3.4 Lift/Luffing cylinder

Item	Description				Part Number
1	Cylinder Lift Luffing Seal Kit *				P25955 P21443 P26181
2	Bush				P17907
3	Cavity plug				P18324
4	Overcentre valve Lift Luffing				P24892 P24891

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**Figure 3.4 Lift/Luffing cylinder**

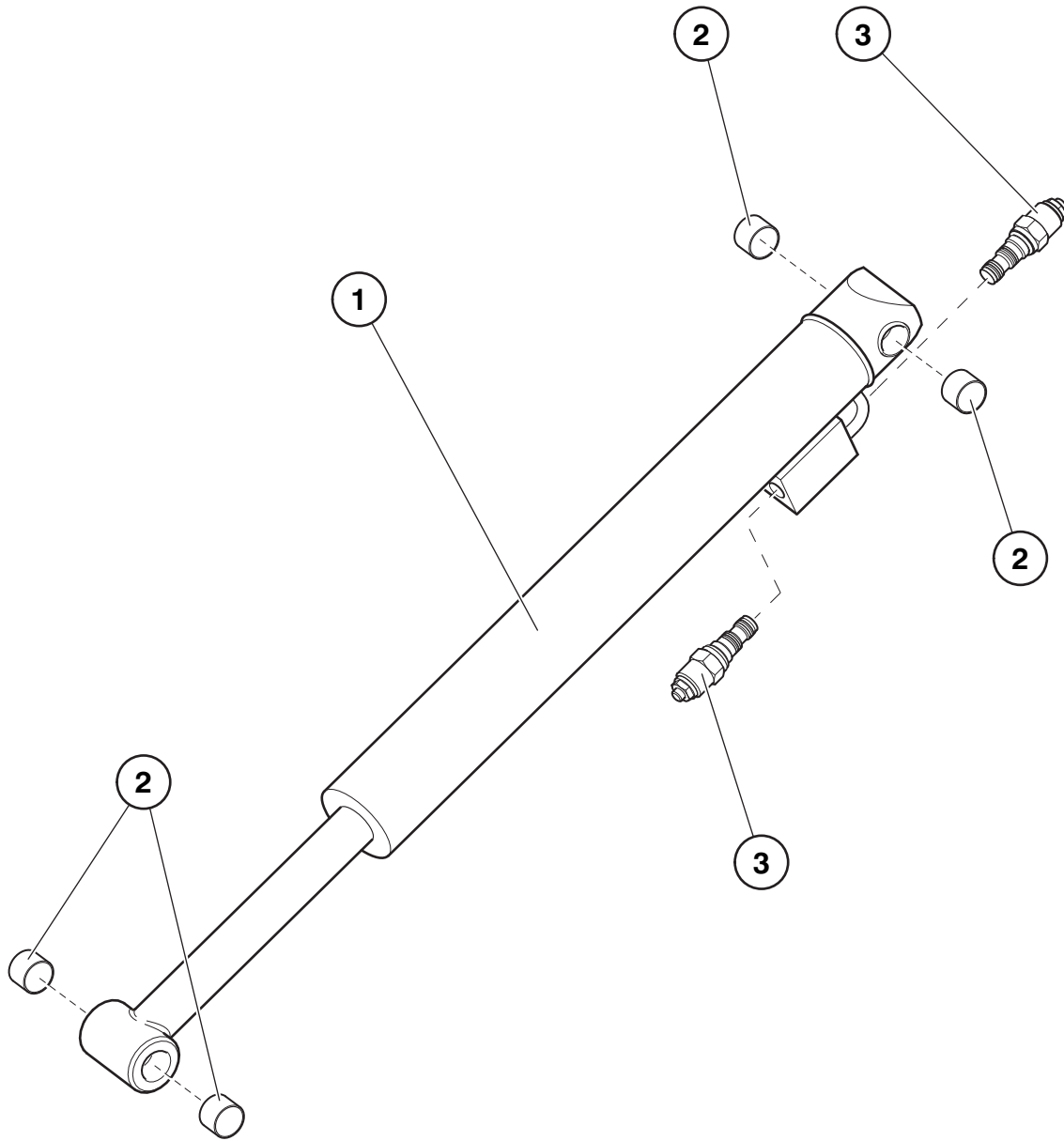
## 3.5 Levelling cylinder

Item	Description				Part Number
1	Cylinder Seal kit *				P24955 P18466
2	Bush DU3025				P10509
3	Overcentre valve				P11956

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**Figure 3.5 Levelling cylinder**

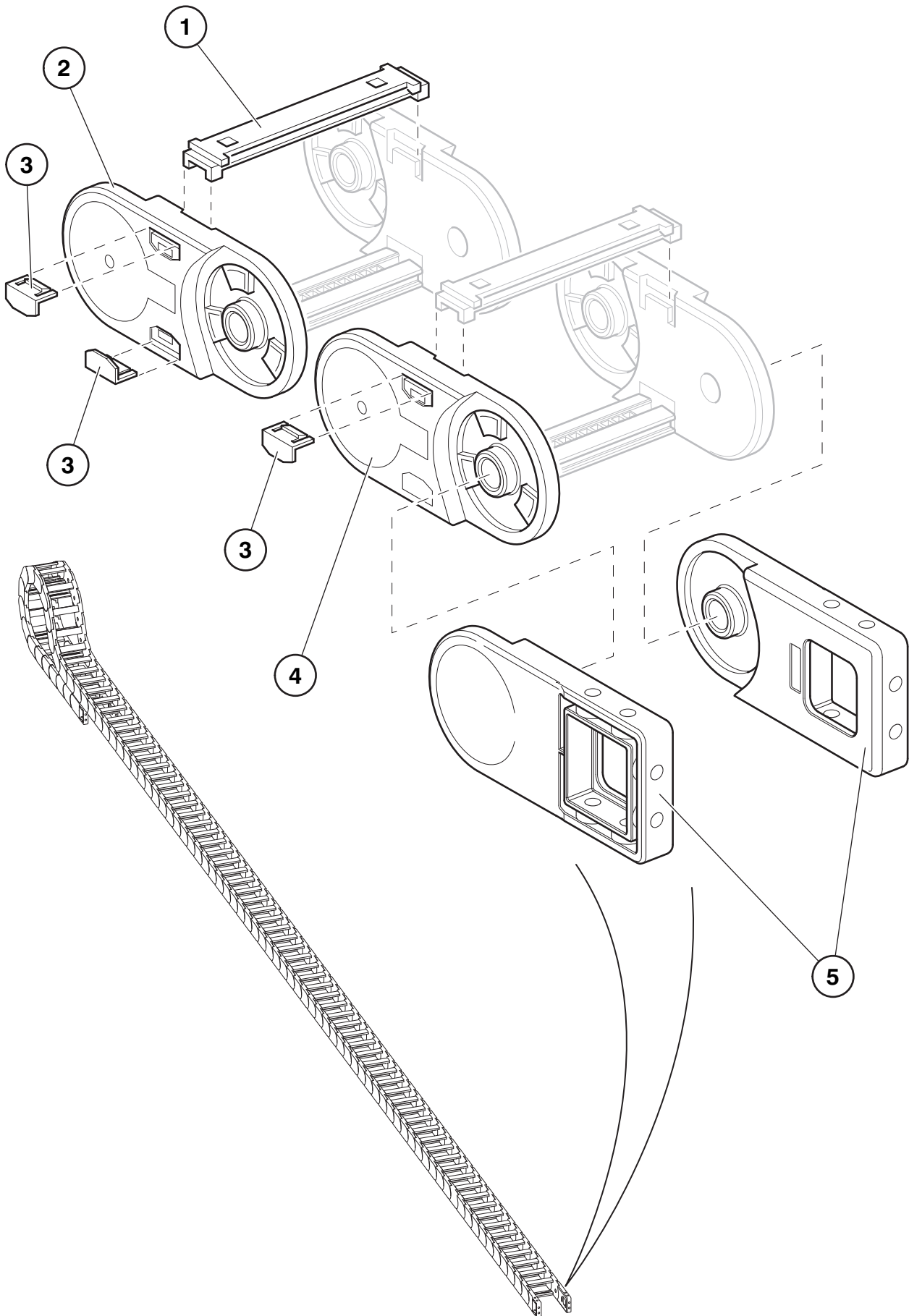
## 3.6 Energy chain

Item	Description				Part Number
	Complete assembly				<b>P23913</b>
<b>1</b>	Bridge				<b>P27302</b>
<b>2</b>	Open side piece				<b>P24027</b>
<b>3</b>	Locking insert (Red)				<b>P27300</b>
<b>4</b>	Locking side piece				<b>P27301</b>
<b>5</b>	End link (2 items)				<b>P24026</b>

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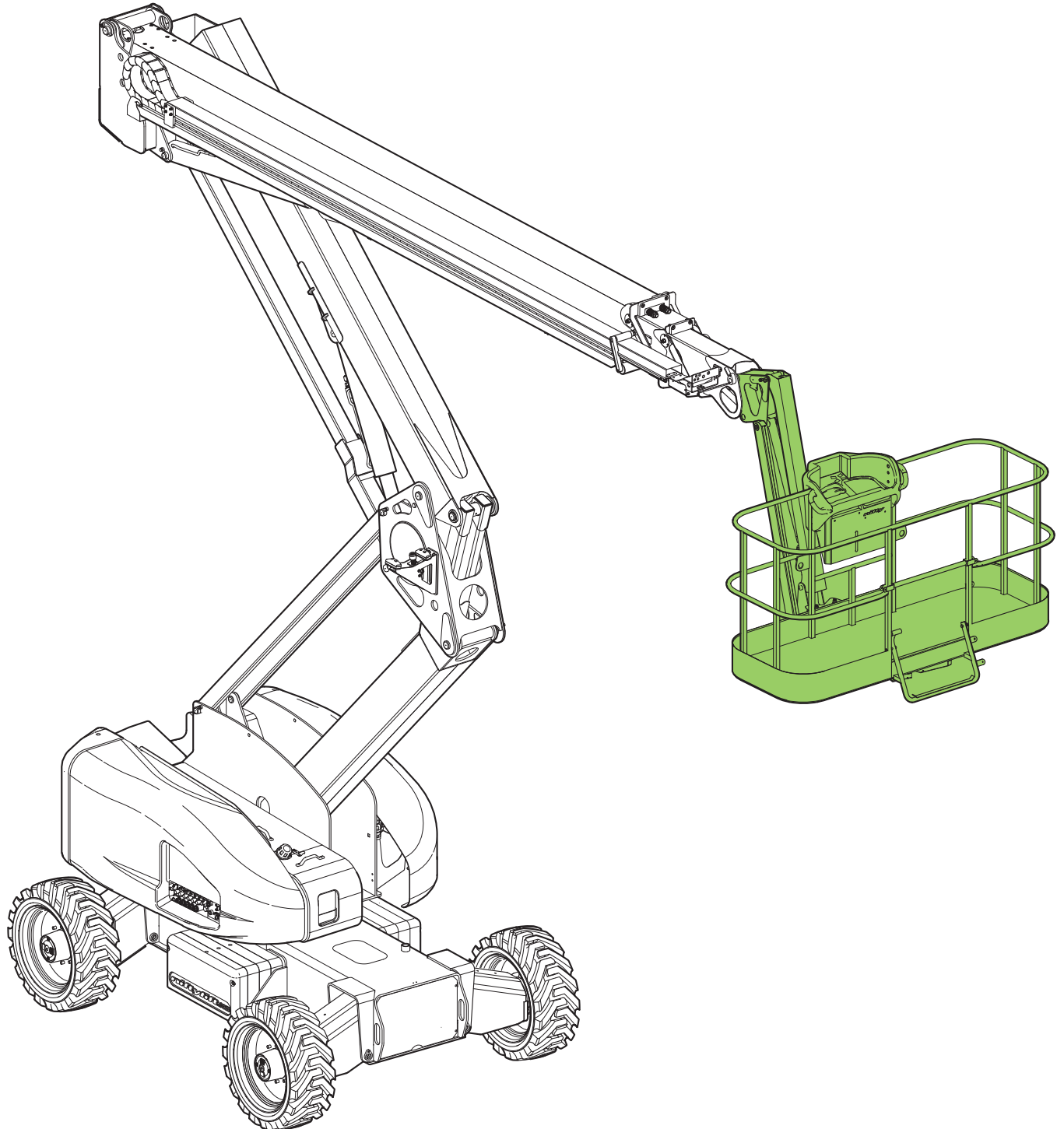
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## 4.1 cage assembly

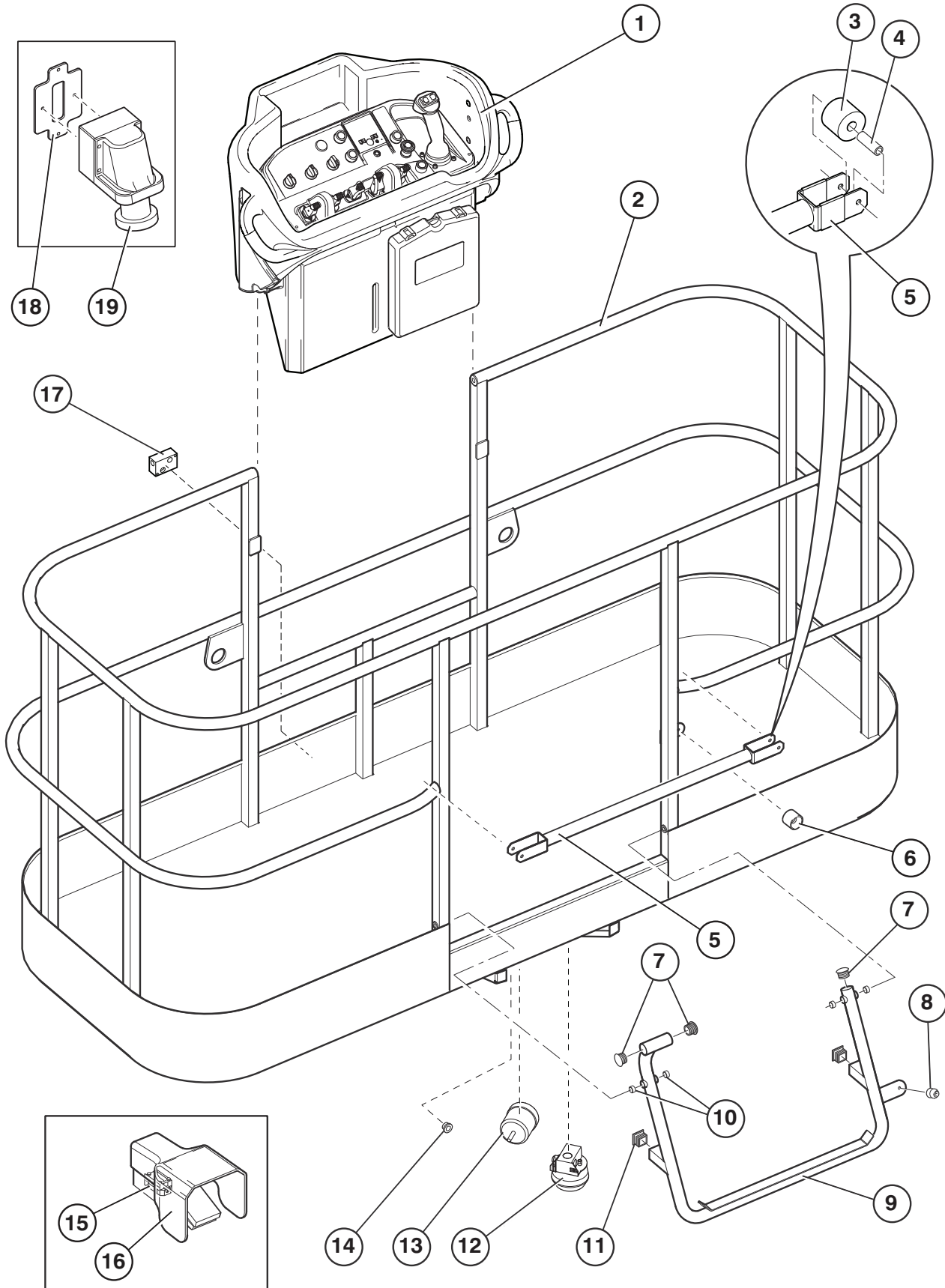
Item Description Part Number

1	Cage console USA See "cage console assembly" on page 4-4.				P27932 P28106
2	Cage 2 person * 3 person				P25218 P21394
3	Nylon roller				P19973
4	Spacer				P18648
5	Cage gate				P13652
6	Latch - female				P13815
7	End cap				P13379
8	Latch - male				P13814
9	Cage step				P18731
10	Bush				P10840
11	End cap				P10841
12	Beacon - Blue				P27950
13	Annunciator				P27951
14	Rubber bush				P21960
15	Contact switch				P26751
16	Footswitch assy Cover ONLY				P26601 P26752
17	Pressure valve				P26368
18	Mounting bracket				P26853
19	Socket 110v 230v (OPTIONAL)				P26843 P26842

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**cage and flyboom**



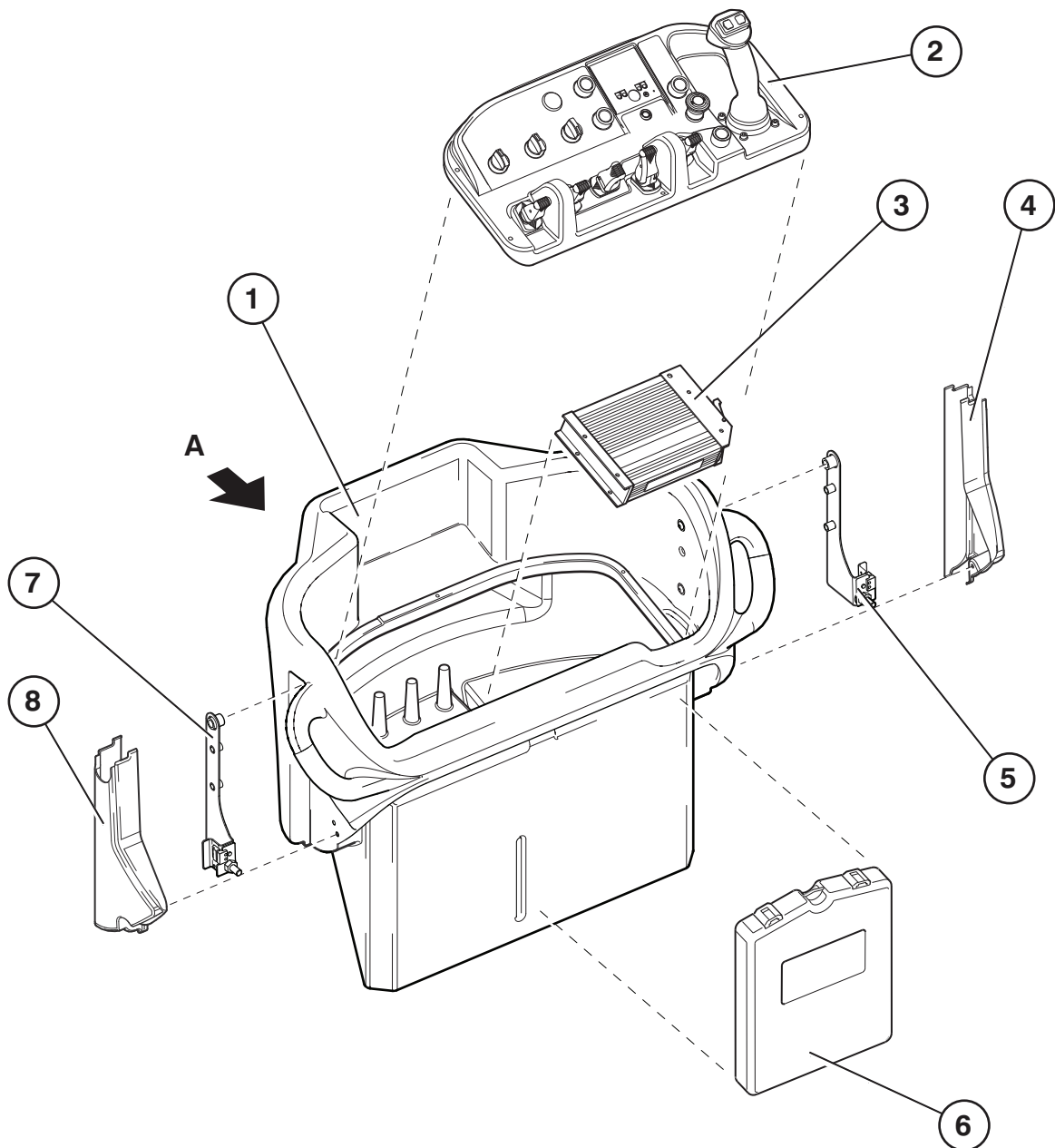
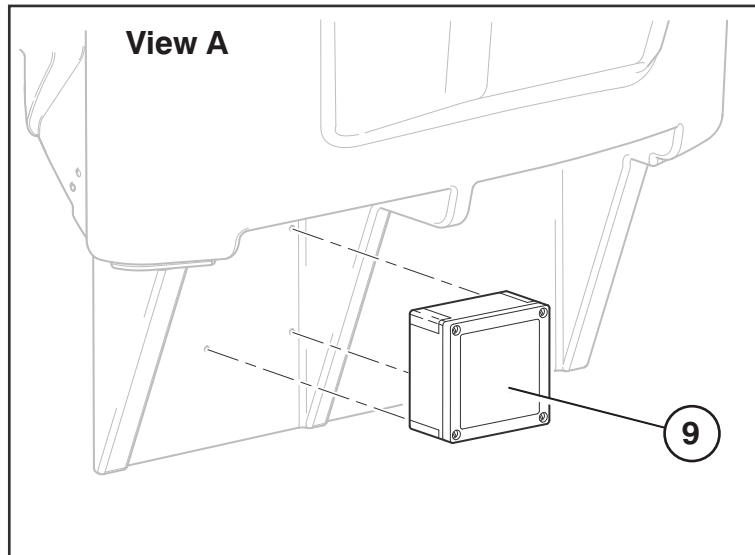
**Figure 4.1 Cage assembly**

## 4.2 cage console assembly

Item	Description				Part Number
1	Console				P22070
2	Control panel assy. See "control panel assembly" on page 4-14.				P27005
3	Safety controller (Not programmed)				P23305
4	Cover <b>RH</b>				P21416
5	SiOPS Bracket <b>RH</b> assembly See "SiOPSTM assembly" on page 4-6.				P26150
6	Instruction manual box				P11618
7	SiOPS Bracket <b>LH</b> assembly See "SiOPSTM assembly" on page 4-6.				P26149
8	Cover <b>LH</b>				P21417
9	Cage weigh box assembly				P25879

french  
german  
spanish

cage and flyboom



french  
german  
spanish

**cage and flyboom**



4-5

**Figure 4.2 Cage console**

## 4.3 SiOPS™ assembly

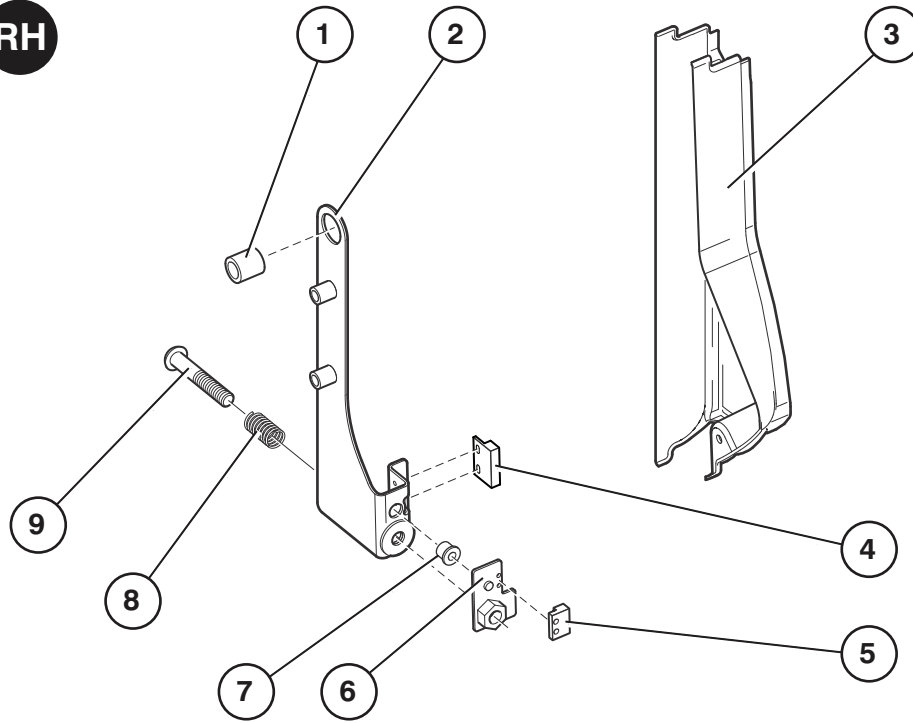
Item	Description				Part Number
	Assembly RH LH (Items 3 and 12 not included)				P26150 P26149
1	Boss				P21526
2	Console bracket RH				P21641
3	Cover RH				P21416
4	Proximity switch				P22061
5	Magnet				P22062
6	Magnet bracket RH				P21643
7	Plastic boss				P21645
8	Spring				P22298
9	Button socket screw (M10 x 60)				N/A
10	Console bracket LH				P21640
11	Magnet bracket LH				P21642
12	Cover LH				P21417

french  
german  
spanish

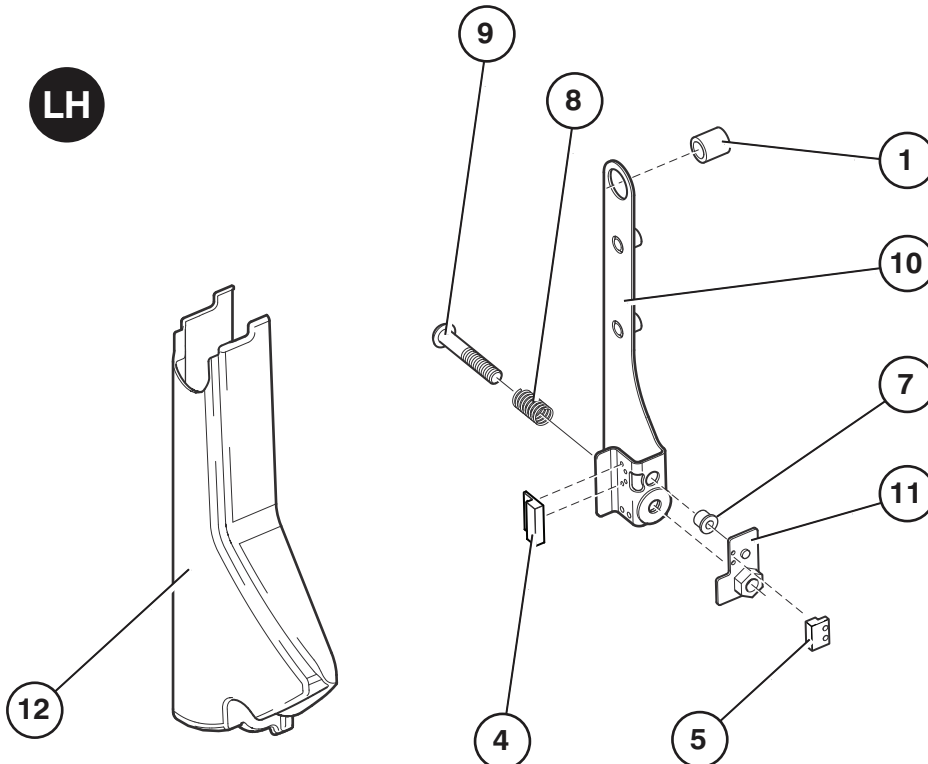
cage and flyboom



**RH**



**LH**



french  
german  
spanish

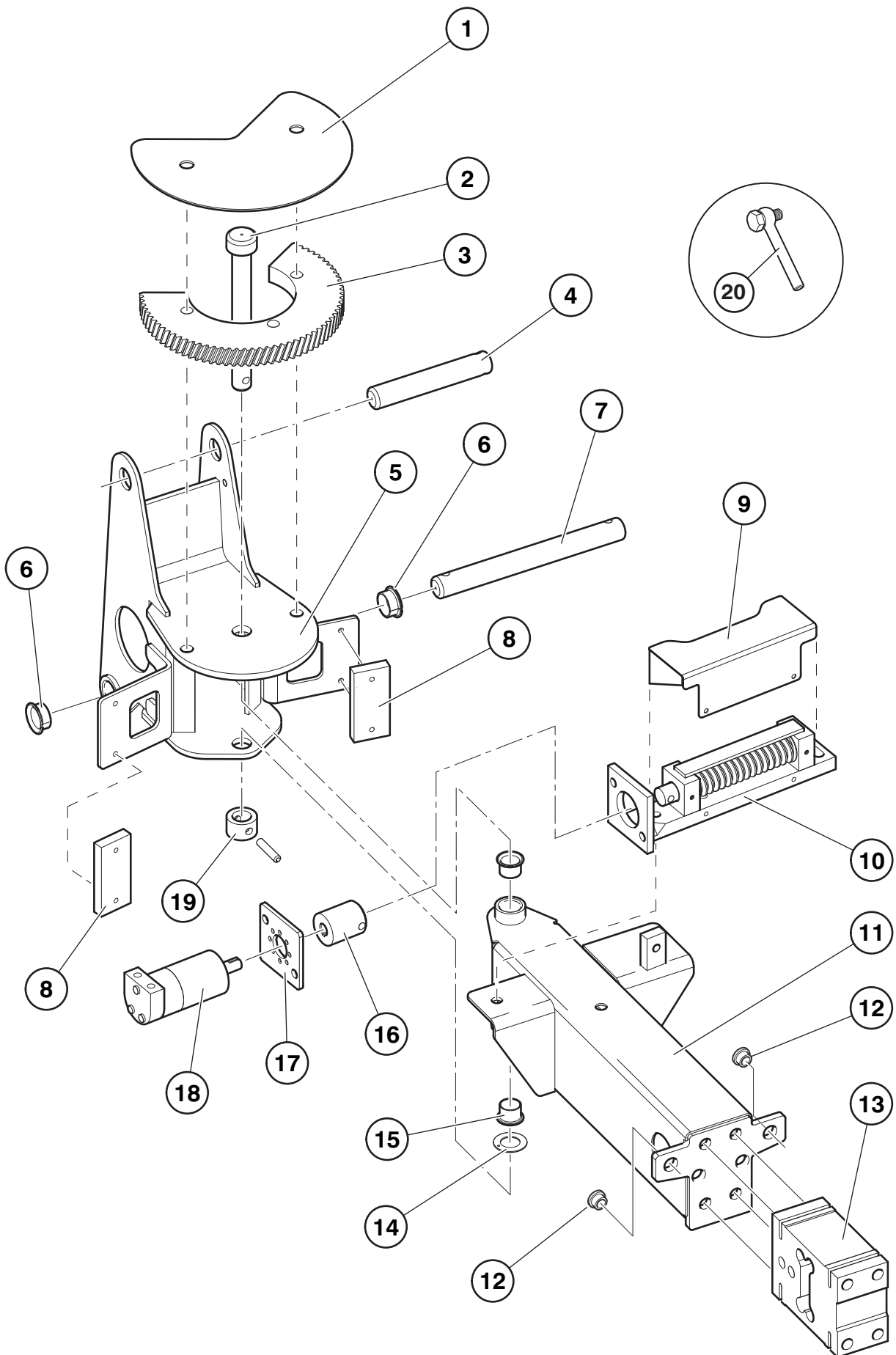
**cage and flyboom**

## 4.4 cage rotate assembly

Item	Description				Part Number
1	Guard				P18441
2	Pin - Cage rotate				P17544
3	Gear wheel				P17752
4	Pin - 175mm				P15953
5	Bracket				P24631
6	Bush 3016DU				P16337
7	Pin - 280mm				P15649
8	Rubber pad				P18347
9	Guard - Worm				P17800
10	Worm gear assembly				P17812
11	Extender bracket				P22651
12	Rubber bush				P21960
13	Load cell				P23420
14	Thrust washer				P10594
15	Bush				P12250
16	Drive coupling				P17735
17	Adaptor plate				P17747
18	Motor				P15686
19	Retaining collar				P16504

french  
german  
spanish

cage and flyboom



french  
german  
spanish

**cage and flyboom**



**Figure 4.4 Cage rotate assembly**

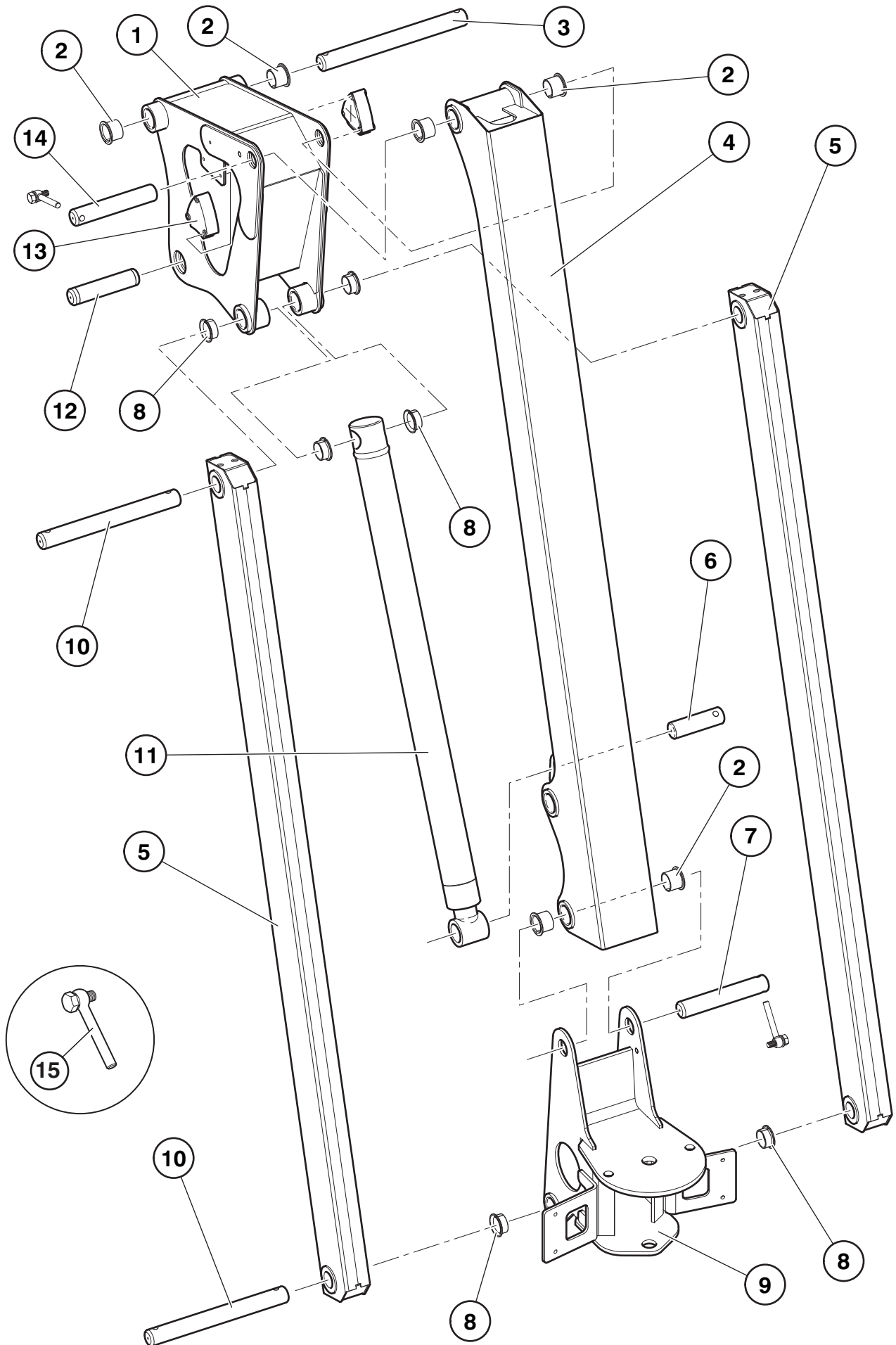
## 4.5 flyboom assembly

Item	Description				Part Number
1	Fly knuckle				P24434
2	Bush				P12651
3	Pin - 294mm				P17706
4	Flyboom - Upper				P26732
5	Flyboom - Lower				P24530
6	Pin - 101mm				P15391
7	Pin - 175mm				P15953
8	Bush				P16337
9	Cage bracket				P24631
10	Pin - 280mm				P15649
11	Cylinder Seal kit *				P19413 P13267
12	Pin - 133mm				P24060
13	Tilt sensor				P24635
14	Pin - 165mm				P12633
15	Swing bolt				P15966

\* Not illustrated

french  
german  
spanish

cage and flyboom



french  
german  
spanish

**cage and flyboom**



**Figure 4.5 Flyboom assembly**

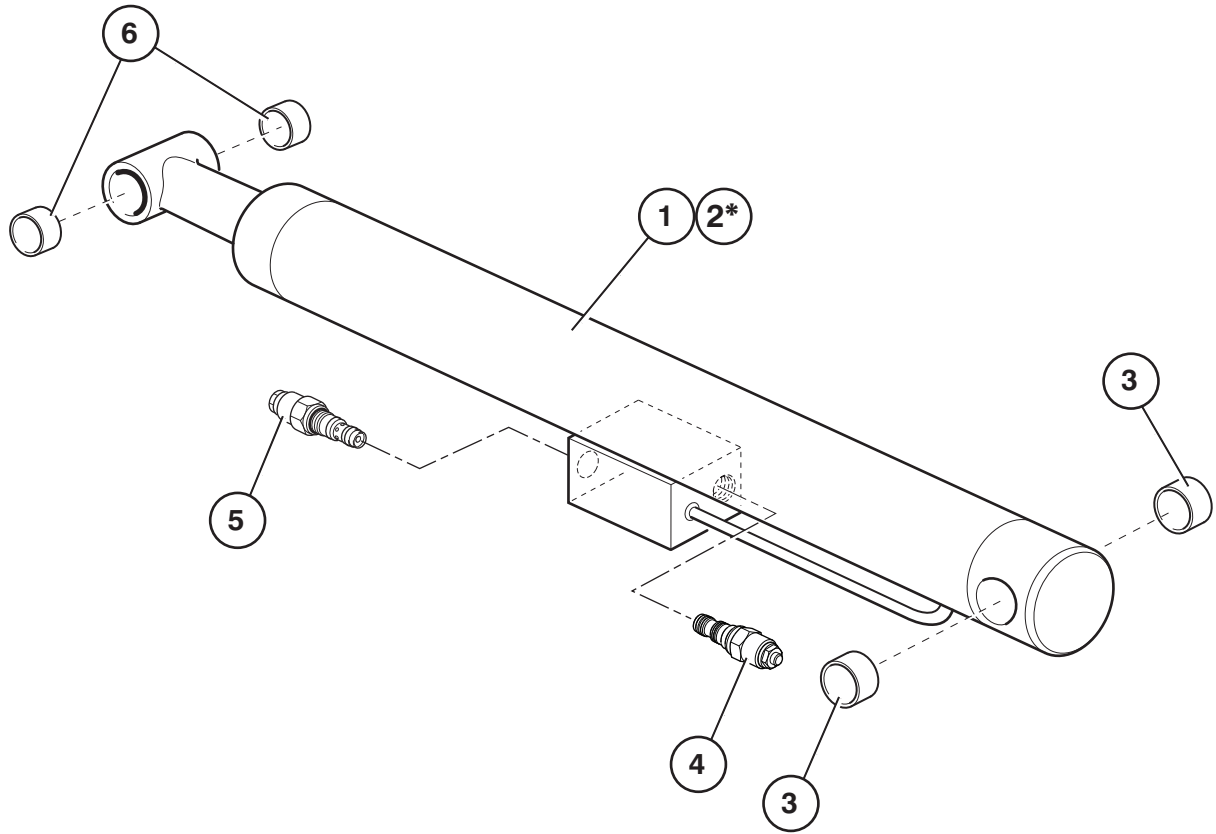
## 4.6 flyboom cylinder

Item	Description				Part Number
1	Cylinder				P19413
2 *	Seal kit for item 1				P13267
3	Bush				P10034
4	Load valve				P11956
5	Over centre valve				P15706
6	Bush				P10509

\* Not illustrated

french  
german  
spanish

cage and flyboom



french  
german  
spanish

**cage and flyboom**

**Figure 4.6 Flyboom cylinder**

## 4.7 control panel assembly

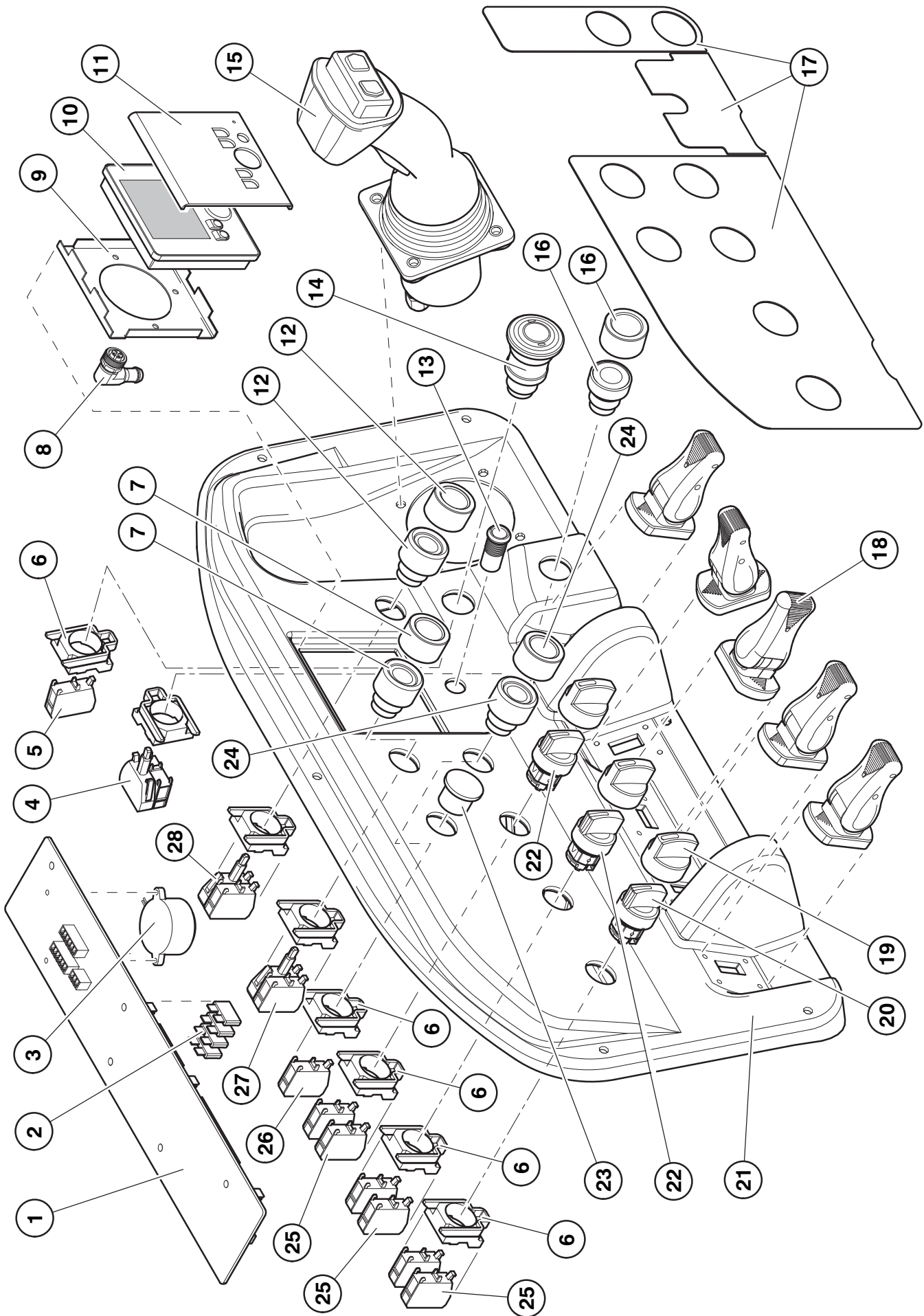
Item Description Part Number

Item	Description	Part Number
	Complete assembly <b>Standard</b>	<b>P27005</b>
1	PCB - Cage console	<b>P26487</b>
2	Fuse - Blade 15A Fuse - Blade 2A	<b>P22193</b> <b>P22192</b>
3	Alarm sounder	<b>P11112</b>
4	Contact <b>NO</b> LED block <b>Green</b>	<b>P24323</b> <b>P24338</b>
5	Contact <b>NC</b>	<b>P24324</b>
6	Base, switch	<b>P24322</b>
7	Button - Yellow (with boot)	<b>P24343</b>
8	Plug, 5 way	<b>P24230</b>
9	Backing plate	<b>P27142</b>
10	Digital display unit (Not programmed)	<b>P24104</b>
11	Screen protector	<b>P24586</b>
12	Button - White (with boot)	<b>P24342</b>
13	LED, Red	<b>P24426</b>
14	E-Stop button USA Only	<b>P24317</b> <b>P28564</b>
15	Joystick	<b>P26589</b>
16	Button - Green (with boot)	<b>P24333</b>
17	Label - Switches	<b>P27368</b>
18	Paddle switch	<b>P26554</b>
19	Rubber cover	<b>P24319</b>
20	Selector switch	<b>P24327</b>
21	Console lid	<b>P25995</b>
22	Selector switch (sprung)	<b>P24327</b>
23	Blanking plug	<b>P24344</b>

french  
german  
spanish

cage and flyboom





french  
german  
spanish

cage and flyboom

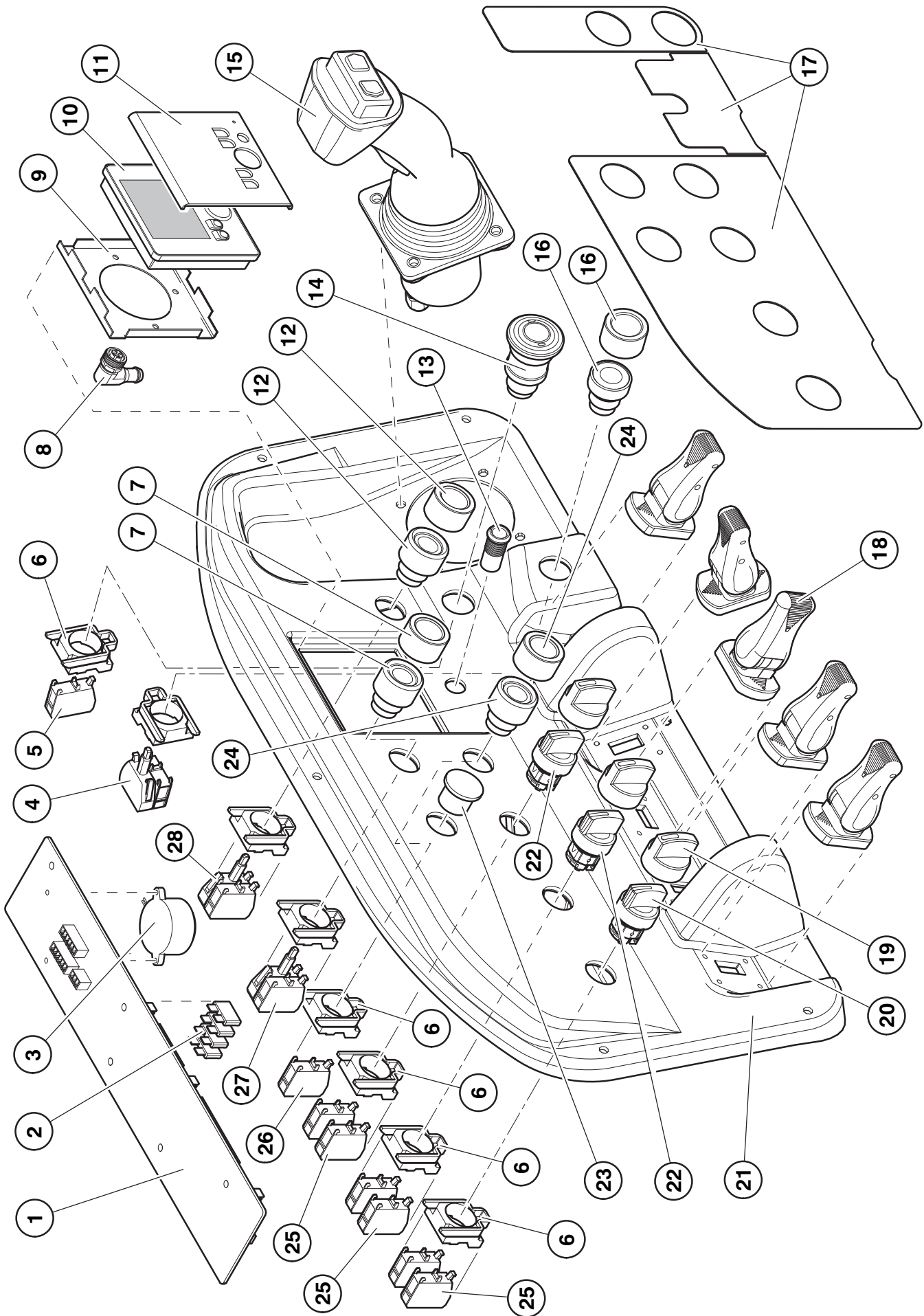
Figure 4.7 Control panel assembly

## 4.7 continued

Item	Description				Part Number
24	Button - Blue (with boot)				P24345
25	Contact <b>NO (2 off)</b>				P24323
26	Contact <b>NO (1 off)</b>				P24323
27	Contact <b>NO</b> LED block <b>Orange</b>				P24323 P24341
28	Contact <b>NO</b> LED block <b>White</b>				P24323 P24336

french  
german  
spanish

cage and flyboom



french  
german  
spanish

**cage and flyboom**

Figure 4.1



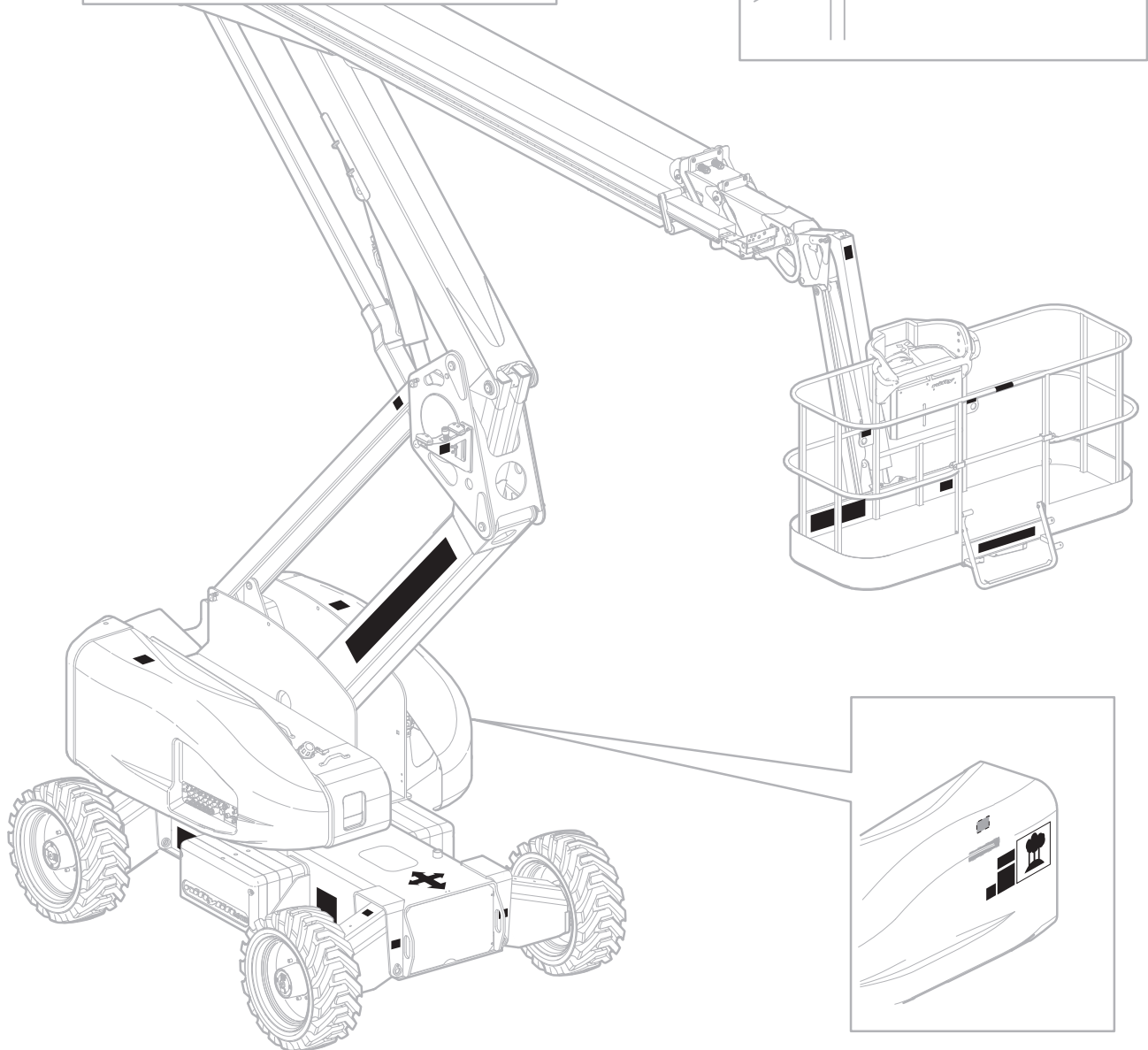
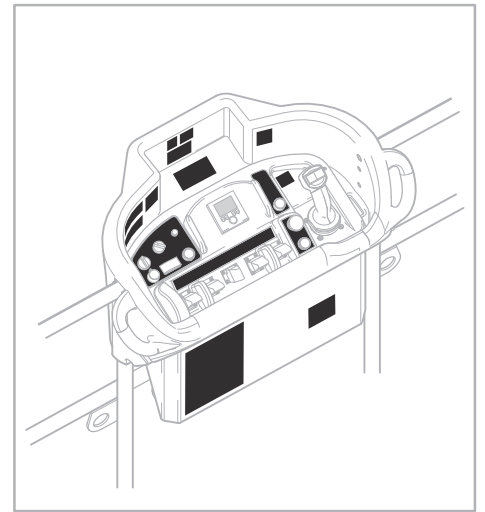
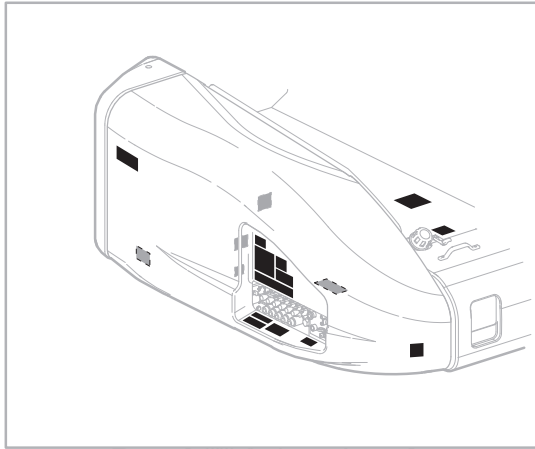


**nifty**

**HR28 (SP85)**



*illustrated parts manual*  
*Manuel illustré de pièces détachées*  
*Illustrierte Stückliste*  
*Manual de piezas ilustrado*



**5**



**labelling**  
french  
german  
spanish

## 5.1 Label locations

Item	Description	Part Number
1	Overload warning	P18848
	french	P18849
	german	P18850
	spanish	P18851
	dutch	P18852
	swedish	P19638
2	Tilt alarm sounds	P14868
	french	P14869
	german	P14870
	spanish	P14871
	dutch	P16398
	swedish	P19719
3	IPAF - Training	P22055
	french	P22055
	german	P22055
	spanish	P22055
	dutch	P22055
	swedish	P22055
4	Clunk Click	P19961
	french	P19961
	german	P19961
	spanish	P19961
	dutch	P19961
	swedish	P19961
5	Fitted with SiOPS	P22820
	french	P22821
	german	P22822
	spanish	P22823
	dutch	P22824
	swedish	P22826
6	Emergency stop switch warning	P14864
	french	P14865
	german	P14866
	spanish	P14867
	dutch	P16628
	swedish	P19625

french  
german  
spanish

labeling

Item	Description	Part Number
<b>7</b>	Danger - Do not place objects...	<b>P21511</b>
	french	<b>P21511</b>
	german	<b>P21511</b>
	spanish	<b>P21511</b>
	dutch	<b>P21511</b>
	swedish	<b>P21511</b>
<b>8</b>	Cage controls	<b>P27368</b>
	french	<b>P27368</b>
	german	<b>P27368</b>
	spanish	<b>P27368</b>
	dutch	<b>P27368</b>
	swedish	<b>P27368</b>
<b>9</b>	Operating instructions	<b>P14892</b>
	french	<b>P14892</b>
	german	<b>P14892</b>
	spanish	<b>P14892</b>
	dutch	<b>P14892</b>
	swedish	<b>P14892</b>
<b>10</b>	General warning	<b>P24900</b>
	french	<b>P21971</b>
	german	<b>P21972</b>
	spanish	<b>P21973</b>
	dutch	<b>P21974</b>
	swedish	<b>P21976</b>
<b>11</b>	Raise flyboom	<b>P19442</b>
	french	<b>P19442</b>
	german	<b>P19442</b>
	spanish	<b>P19442</b>
	dutch	<b>P19442</b>
	swedish	<b>P19442</b>
<b>12</b>	Cage gate warning	<b>P18335</b>
	french	<b>P18335</b>
	german	<b>P18335</b>
	spanish	<b>P18335</b>
	dutch	<b>P18335</b>
	swedish	<b>P18335</b>

 french  
 german  
 spanish

**labelling**


## 5.1 continued

Item	Description	Part Number
13	Harness point	P14883
	french	P14883
	german	P14883
	spanish	P14883
	dutch	P14883
	swedish	P14883

14	Warning - SWL 280kg	2 man cage	P24820
		3 man cage	P24841
	french	P24820	
	german	P24841	
	spanish	P24820	
	dutch	P24820	
swedish	P24820		

15	Cage tie-down warning	P21404
	french	P21404
	german	P21404
	spanish	P21404
	dutch	P21404
	swedish	P21404

16	Footswitch	P14884
	french	P14885
	german	P14886
	spanish	P14887
	dutch	P16629
	swedish	P19626

17	Niftylift.com	P14390
	french	P14390
	german	P14390
	spanish	P14390
	dutch	P14390
	swedish	P14390

18	Tank pressure - Warning	P16365
	french	P17094
	german	P17039
	spanish	P17041
	dutch	P16903
	swedish	P19954

french  
german  
spanish

labelling



Item	Description	Part Number	
19	Hydraulic oil	P17226	
	Low Temperature Bio Oil	P23622	
	french	P17226	
	german	P17226	
	spanish	P17226	
	dutch	P17226	
	swedish	P17226	
20	Noise warning	P17124	
	french	P17124	
	german	P17124	
	spanish	P17124	
	dutch	P17124	
	swedish	P17124	
	21	'Green Machine'	P22804
french		P22804	
german		P22804	
spanish		P22804	
dutch		P22804	
swedish		P22804	
22		Rotating Machinery (USA only)	P15010
	french	P15010	
	german	P15010	
	spanish	P15010	
	dutch	P15010	
	swedish	P15010	
	23	Hand crush	P14782
french		P14782	
german		P14782	
spanish		P14782	
dutch		P14782	
swedish		P14782	
24		Logo	HR28 Hybrid HR28
	Logo - USA	SP85 Hybrid SP85	P27898 P27897

 french  
 german  
 spanish

**labelling**

## 5.1 continued

Item	Description	Part Number
25	No step	P14785
	french	P14785
	german	P14785
	spanish	P14785
	dutch	P14785
	swedish	P14785

26	Travel direction	P27048
	french	P27048
	german	P27048
	spanish	P27048
	dutch	P27048
	swedish	P27048

27	Tie down point	P14958
	french	P14958
	german	P14958
	spanish	P14958
	dutch	P14958
	swedish	P14958

28	Point load - 87.8 kN	P25068
	French	P25068
	german	P25068
	spanish	P25068
	dutch	P25068
	swedish	P25068

29	Gearbox disengage	P26280
	french	P26281
	german	P26282
	spanish	P26283
	dutch	P26284
	swedish	P26286

30	Daily safety check list	P14908
	french	P14909
	german	P14910
	spanish	P14911
	dutch	P16630
	swedish	P19629

See Figure 5.1, Page 5-10

Item	Description	Part Number
<b>31</b>	Diesel ONLY	P14414
	french	P14414
	german	P14414
	spanish	P14414
	dutch	P14414
	swedish	P14414
<b>32</b>	Battery isolator	P18600
	french	P18600
	german	P18600
	spanish	P18600
	dutch	P18600
	swedish	P18600
<b>33</b>	Battery drain	P19850
	french	P19851
	german	P19852
	spanish	P19853
	dutch	P19854
	swedish	P19856
<b>34</b>	Charger socket	240V 110V
	french	P26425
	german	P26425
	spanish	P26425
	dutch	P26425
	swedish	P26425
<b>35</b>	Auxilliary descent	P24822
	french	P24822
	german	P24822
	spanish	P24822
	dutch	P24822
	swedish	P24822
<b>36</b>	Base Controls	P25155
	french	P25155
	german	P25155
	spanish	P25155
	dutch	P25155
	swedish	P25155

 french  
 german  
 spanish

**labelling**

5-7

## 5.1 continued

Item	Description	Part Number
37	Auxilliary descent	P25067
	french	P25067
	german	P25067
	spanish	P25067
	dutch	P25067
	swedish	P25067

38	Hydraulic Levers - Base	P24821
	french	P24821
	german	P24821
	spanish	P24821
	dutch	P24821
	swedish	P24821

39	Emergency Controls	P21700
	french	P21701
	german	P21702
	spanish	P21703
	dutch	P21704
	swedish	P21706

40	Base lever - Cage level	P24823
	french	P24823
	german	P24823
	spanish	P24823
	dutch	P24823
	swedish	P24823

41	Maintenance free batteries (Hybrid)	P27750
	french	P27751
	german	P27752
	spanish	P27753
	danish	P27756
	swedish	P27755

42	Tier 4/EU Emmisions	P25407
	french	P25407
	german	P25407
	spanish	P25407
	dutch	P25407
	swedish	P25407

french  
german  
spanish

labeling

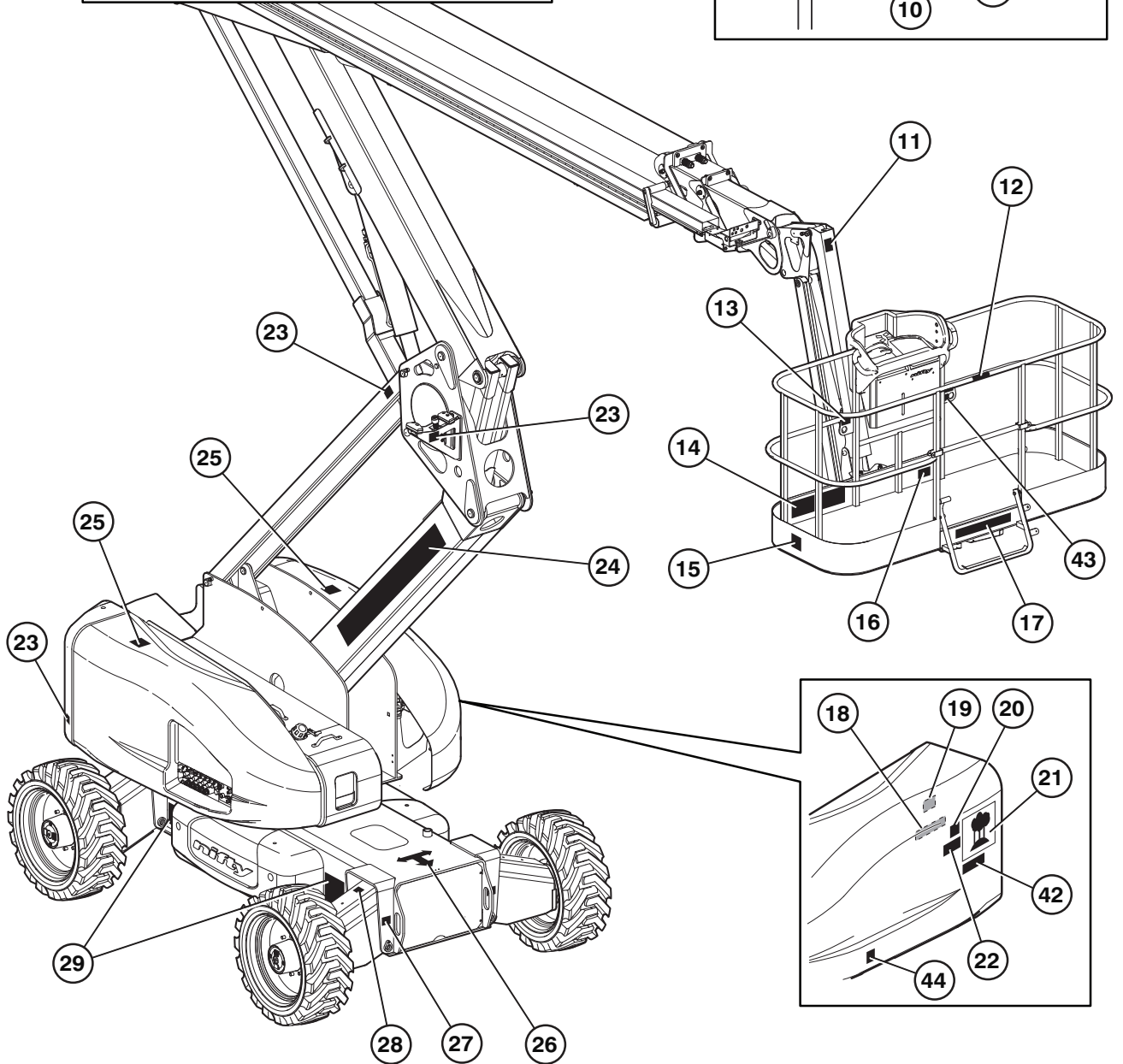
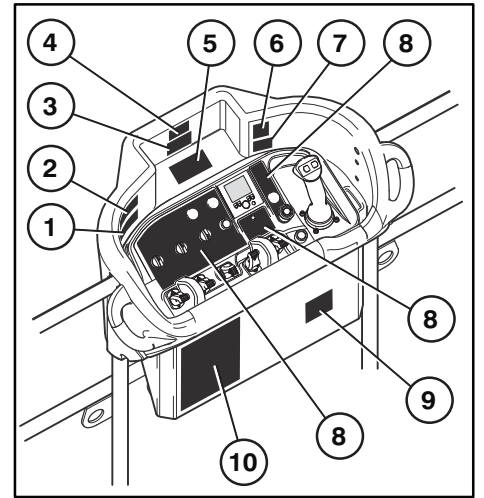
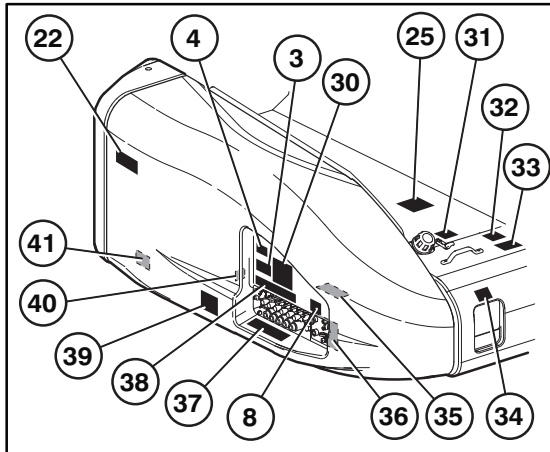


Item	Description	Part Number	
43	Power to cage socket	240V	
		110V	
	french	P26427	
	german	P26427	
	spanish	P26427	
	dutch	P26427	
	swedish	P26427	
44	Power to cage socket	P24787	
		french	P24787
		german	P24787
		spanish	P24787
		dutch	P24787
		swedish	P24787

See Figure 5.1, Page 5-10

french  
german  
spanish

**labelling**



french  
german  
spanish

labelling

Figure 5.1 Label locations

**1** **DANGER**

IF OVERLOAD ALARM ACTIVATES, ALL FUNCTIONS WILL HALT. REMOVE EXCESS LOAD IMMEDIATELY IN A SAFE MANNER TO RESTORE FUNCTIONS.

**2** **DANGER**

If tilt alarm sounds descend immediately and re-level machine base.

**3** **CAUTION**

**SIOPS™**

**WHEN OPERATING THIS MACHINE THE USER MUST BE AWARE OF OVERHEAD OBSTRUCTIONS.**

If the operator pushes into the console, SIOPS™ will interrupt all machine movement. The green button is available as a manual override and illuminates when the footswitch is rendered inactive.

**To reset the footswitch:**

1. Release load from front of console.
2. Ensure cage controls are in neutral position and clear of objects.
3. Raise foot clear of footswitch and lift finger off green button, then replace foot onto footswitch.
4. Footswitch is now active and full control is restored.

**4** **Clunk Click!**

Wear a full body harness with a short lanyard in boom type platforms

**5** **DANGER**

Death or serious injury may result if emergency stop switch is disabled, blocked or inoperable.

**6** **DANGER**

Do not place objects on controls. Failure to keep controls clear may cause inadvertent machine operation, resulting in serious injury or death.

**7** **DANGER**

Do not start the lift if you can see a person in the path of the platform.

**8** **WARNING**

TANK MAY BE PRESSURISED - REMOVE CAP WITH CAUTION. OPEN SLOWLY, WAIT UNTIL OIL HAS COOLED.

**9** **CAUTION**

READ THIS BEFORE OPERATING THIS MACHINE. THIS NOTICE DOES NOT REPLACE THE OPERATING MANUAL WHICH SHOULD BE READ BEFORE OPERATING THIS MACHINE FOR THE FIRST TIME.

**YOU MUST NOT OPERATE THIS MACHINE** unless you have been trained in the safe operation of this machine. Training includes complete knowledge of the safety and operating instructions contained in the manufacturer's manuals, your employer's work rules and applicable governmental regulations. Inspect the machine before use to be sure it is operating properly and perform the safety checks listed in the operating manual and on the block under this canopy. This machine must be inspected / serviced as the operating manual requires.

**ELECTROCUSSION HAZARD**  
THIS MACHINE IS NOT INSULATED

- Maintain a safe distance from electrical lines and apparatus. You must allow the machine to stay rock and log and electrical lines swaying.
- This machine does not provide protection from contact with or proximity to an electrically charged conductor. You must maintain clearance of at least 3m (10 ft) between any part of the machine or its load and any electrical line or apparatus carrying over 50,000 volts. Further clearance of 1m (3 ft) is required for every additional 10,000 volts or less.

**EXPLOSION HAZARD**

- Do not start the lift if you can see a spark, fire, hot pipes or dead fuel.
- The engine must be shut down while fuel tanks are being filled. Fueling and battery charging must be done in a well-ventilated area free of any raised flames or other means of ignition which may cause fire or explosion.
- Do not use flammable liquids and dead fuels are flammable.

**HAZARDOUS SUBSTANCES AND ENVIRONMENTS**

- This machine contains several hazardous substances such as but not limited to: Battery acid, Hydraulic Fluid, Engine Coolant, Antifreeze, LPG, Diesel Fuel, Fumic Acid, Engine Oil, Grease, Gasoline.
- Covers and canopies should remain closed when the machine is in operation. Only trained personnel should carry out maintenance on the machine, ensuring at all times they protect themselves from electrical, fuel and mechanical hazards.

**DAMAGED OR MALFUNCTIONING MACHINE HAZARD**

- Do not use a damaged or malfunctioning machine.
- If the machine malfunctions during operation or the lift outrigger alarm sounds, stop work and descend as soon as possible in a smooth controlled manner.

**STABILITY HAZARD**

- The machine must be on smooth, firm level surface or levelled using the outriggers if fitted before using the booms.
- Do not use the machine in strong updrafts unless over 12.5m (41ft) or 20m(65ft).
- Never exceed the platform capacity.
- Do not attempt to climb or descend while exceeding the rated limitations of the machine.
- Never measure a slope exceeding 20%.
- Use with additional caution when carrying the machine to or from a position (e.g. across uneven terrain, gates, curbs, on a slippery surface, and near holes or drops).

**COLLISION HAZARD**

- Head protection must be worn.
- Operate machine with extreme caution. Use controls slowly for smooth operation and watch for obstructions which may strike persons or machine.
- Make yourself familiar with the work area before using the machine, checking for overhead obstructions, obstructions or personnel.
- Be aware of trailing hands when gripping the handrail.

**RESTRAINT HAZARD**

- All personnel on the platform that wear a full body harness with short lanyard should be secured to the designated harness point.
- Do not drink, eat, or stand on the platform.
- Do not attempt to lean the platform by climbing down the booms.
- If the platform entry gate is down before raising the booms.
- Check that any load or equipment being used in the platform are secure and cannot fall off the platform.

**PLATFORM OVERLOAD WARNING**

- If machine is fitted with an overload alarm, when it activates all functions will halt. Remove excess load immediately in a safe manner to restore functions.

**10** **DANGER**

Death or serious injury may result if footswitch is disabled, blocked or inoperable?

**11** **WARNING**

280KG (620lbs) MAX

80KG (177lbs) 80KG (177lbs) 80KG (177lbs) 40KG (89lbs)

12.5 m/s (28mph) MAX

400N (90lbs) MAX

**12** **WARNING**

ISO 22/32

**13** **WARNING**

85 dB LWA

**14** **DANGER**

Death or serious injury may result if footswitch is disabled, blocked or inoperable?

POWER ON POWER OFF

**15** **WARNING**

Labels & Manuals: Check all labels, placards and Operating & Safety manual (located in the box within the platform) are in place and legible.

Structure: Check there are no loose, missing, damaged or malfunctioning components including but not limited to: chassis, booms, platform, gate (free to close under gravity), all welds, guards, covers, boom clamps, brakes, wheels, tyres and outriggers / stabilisers if applicable. Ensure that platform is free from debris, grease or oil that could cause slipping or tripping hazards.

Warnings & Switches: Check there are no loose, missing, damaged or malfunctioning components including but not limited to: platform load sensor, tilt sensor and / or alarm horn, foot pedal, high engine and / or high drive limit switches, micro switches, lights and beacons.

Controls: Check all operating, emergency and manual descent controls function correctly - select an area free from obstructions and hazards, and exercise extreme caution.

Hoses & Wiring: Check there is no damage to or leaks from hydraulic, fuel and air systems, electrical cables and wiring.

Power Systems: Check batteries, engine oil and coolant (if applicable) for condition, cleanliness, connections and correct fluid levels.

Personal Protective Equipment: Check that full body safety harnesses, short lanyards, and hard hats are in good condition and fit for purpose.

More Information: Refer to Operating & Safety manual for further periodic checks & inspections.

**16** **DANGER**

Death or serious injury may result if footswitch is disabled, blocked or inoperable?

**17** **WARNING**

ISO 22/32

**18** **WARNING**

87.8kN

**19** **CAUTION**

**MACHINE DAMAGE RISK: DO NOT TOW THIS MACHINE WITHOUT FIRST DISENGAGING THE DRIVE WHEELS**

Check the wheels before disengaging. Unscrew the plug, remove the central pinion, and replace the plug.

Engaged Disengaged

Damage caused by failure to comply with this notice will not be covered by the manufacturer's warranty.

**20** **WARNING**

**DAILY SAFETY CHECK LIST**

NEVER OPERATE A FAULTY MACHINE AS THIS MAY RESULT IN SERIOUS INJURY OR DEATH

1. Labels & Manuals: Check all labels, placards and Operating & Safety manual (located in the box within the platform) are in place and legible.
2. Structure: Check there are no loose, missing, damaged or malfunctioning components including but not limited to: chassis, booms, platform, gate (free to close under gravity), all welds, guards, covers, boom clamps, brakes, wheels, tyres and outriggers / stabilisers if applicable. Ensure that platform is free from debris, grease or oil that could cause slipping or tripping hazards.
3. Warnings & Switches: Check there are no loose, missing, damaged or malfunctioning components including but not limited to: platform load sensor, tilt sensor and / or alarm horn, foot pedal, high engine and / or high drive limit switches, micro switches, lights and beacons.
4. Controls: Check all operating, emergency and manual descent controls function correctly - select an area free from obstructions and hazards, and exercise extreme caution.
5. Hoses & Wiring: Check there is no damage to or leaks from hydraulic, fuel and air systems, electrical cables and wiring.
6. Power Systems: Check batteries, engine oil and coolant (if applicable) for condition, cleanliness, connections and correct fluid levels.
7. Personal Protective Equipment: Check that full body safety harnesses, short lanyards, and hard hats are in good condition and fit for purpose.
8. More Information: Refer to Operating & Safety manual for further periodic checks & inspections.

**21** **CAUTION**

**MACHINE DAMAGE RISK: DO NOT TOW THIS MACHINE WITHOUT FIRST DISENGAGING THE DRIVE WHEELS**

Check the wheels before disengaging. Unscrew the plug, remove the central pinion, and replace the plug.

Engaged Disengaged

Damage caused by failure to comply with this notice will not be covered by the manufacturer's warranty.

**22** **DANGER**

DANGER PELIGRO ACHTUNG GEVAAR

**23** **WARNING**

87.8kN

**24** **CAUTION**

Machine Damage Risk: Do not tow this machine without first disengaging the drive wheels.

**25** **WARNING**

87.8kN

**26** **CAUTION**

Machine Damage Risk: Do not tow this machine without first disengaging the drive wheels.

**27** **WARNING**

87.8kN

**28** **WARNING**

87.8kN

**29** **CAUTION**

Machine Damage Risk: Do not tow this machine without first disengaging the drive wheels.

**30** **WARNING**

DAILY SAFETY CHECK LIST

NEVER OPERATE A FAULTY MACHINE AS THIS MAY RESULT IN SERIOUS INJURY OR DEATH

1. Labels & Manuals: Check all labels, placards and Operating & Safety manual (located in the box within the platform) are in place and legible.
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7. Personal Protective Equipment: Check that full body safety harnesses, short lanyards, and hard hats are in good condition and fit for purpose.
8. More Information: Refer to Operating & Safety manual for further periodic checks & inspections.

**31** **CAUTION**

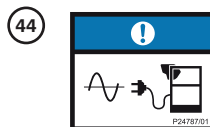
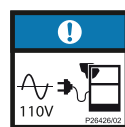
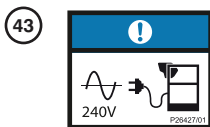
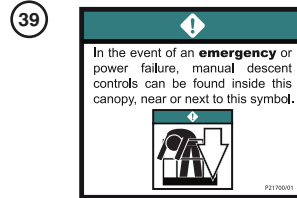
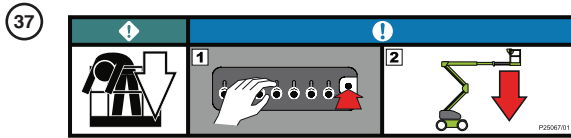
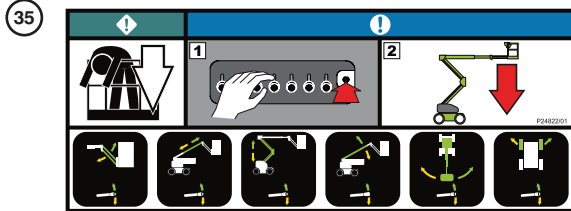
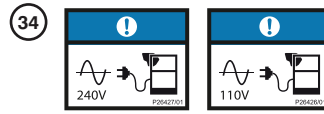
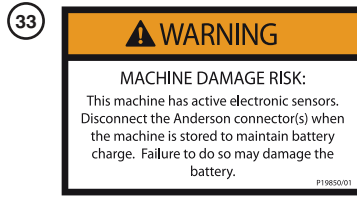
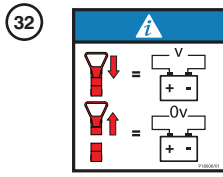
Machine Damage Risk: Do not tow this machine without first disengaging the drive wheels.



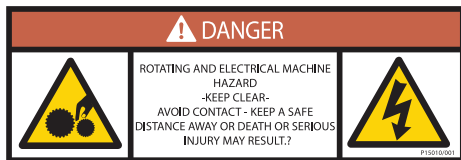
french  
german  
spanish

labelling





22 USA Only



french  
german  
spanish

labelling

Figure 5.3 Labels (32-44)