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Specifications and parts

Upon receipt

- Make sure that you received all items on your order in good condition. Contact your distributor if any parts are damaged or missing.
- Inspect the items for damage that may have occurred during shipment. If you find evidence of damage, see *Claims*, below. All communications regarding this equipment must include the model number and the serial number.
- Before you set up this equipment, read the safety information included with your equipment. Failure to follow safety instructions can result in personal injury or in damage to equipment.

Claims

- Claims for damage during shipment – If your equipment was damaged during shipment, file a claim with the carrier. You can contact Hypertherm for a copy of the bill of lading. If you need additional assistance, call the nearest Hypertherm office listed in the front of this manual.
- Claims for defective or missing merchandise – If any component is missing or defective, contact your Hypertherm distributor. If you need additional assistance, call the nearest Hypertherm office listed in the front of this manual.

Sensor THC Plasma Lifter

The Hypertherm Sensor THC Plasma Lifter has the following specifications.

Table 1 – Specifications

Upper limit switch (Home)	+24 VDC
Lower limit switch	+24 VDC
Breakaway switch	+24 VDC
Sensor signal type	PNP N/O (normally open)
Maximum Z-axis speed	15,200 mm/min (600 in/min) (recommended maximum)
Maximum Z-axis stroke	239 mm (9.40 in.)
Lead screw pitch	5.0 mm/revolution (0.20 in/revolution)
Lifter capacity	11.3 kg (25.0 lb) (recommended maximum)
Motor mount	60 mm (2.36 in.) flange with a 70 mm (2.756 in.) bolt circle diameter Note: Hypertherm does not offer a motor for the Sensor THC Plasma Lifter. See <i>Figure 2</i> on page 32 for motor mount specifications.



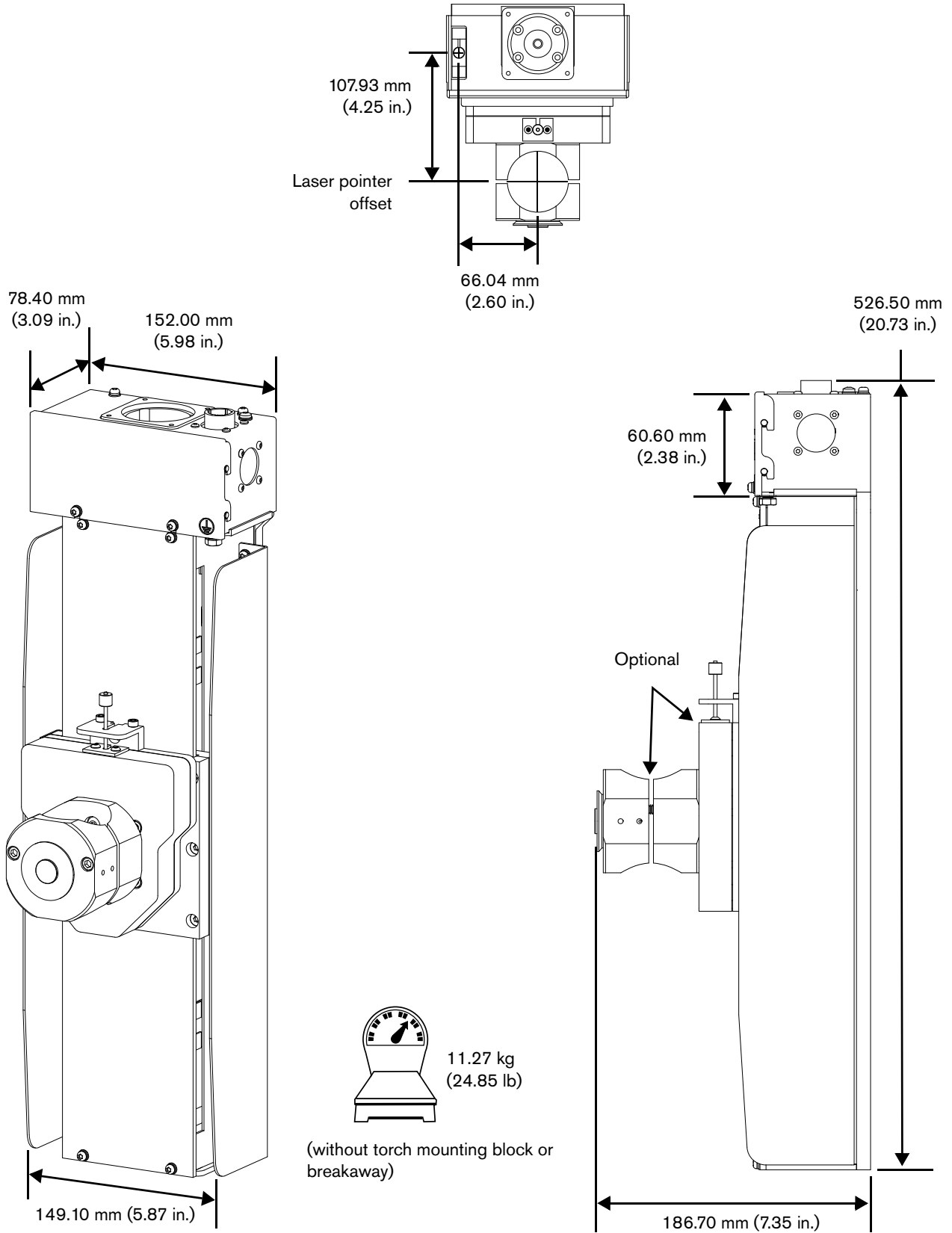
For signal and lifter interface specifications, see *Table 7* on page 48.

The following Sensor THC Plasma Lifter assemblies are available from Hypertherm.

Table 2 – Assemblies

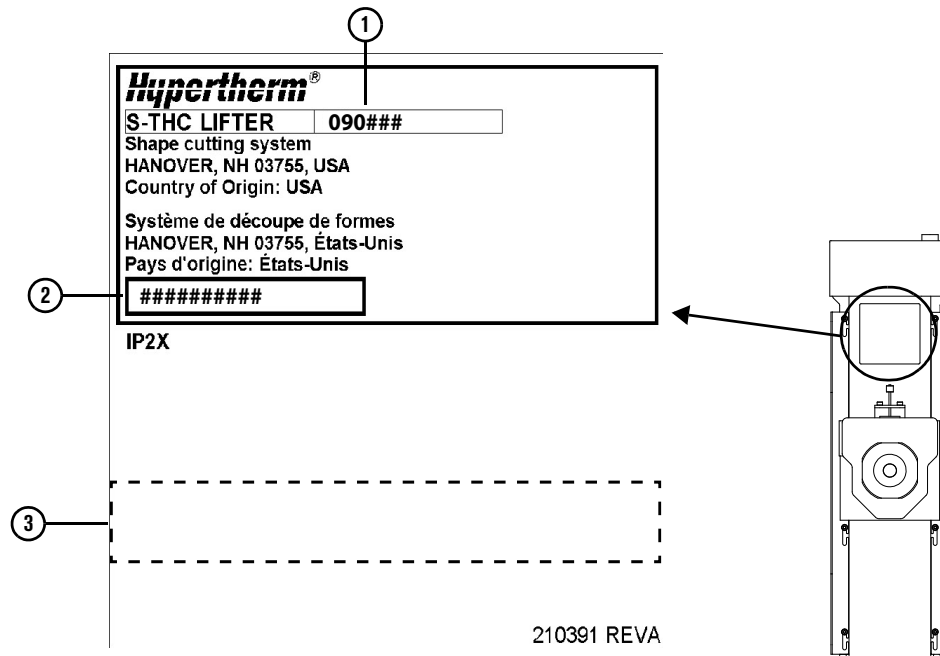
Part number	Torch mounting block	Magnetic breakaway
090187	Not included (lifter only)	Not included (lifter only)
090188	Not included	4.5 kg (10 lb)
090189	Not included	11 kg (25 lb)
090190	35 mm (1-3/8 in.)	4.5 kg (10 lb)
090191	35 mm (1-3/8 in.)	11 kg (25 lb)
090192	44 mm (1-3/4 in.)	4.5 kg (10 lb)
090193	44 mm (1-3/4 in.)	11 kg (25 lb)
090194	51 mm (2 in.)	4.5 kg (10 lb)
090195	51 mm (2 in.)	11 kg (25 lb)
090197	57 mm (2-1/4 in.)	11 kg (25 lb)

Figure 1 – Lifter dimensions (090195 model shown)



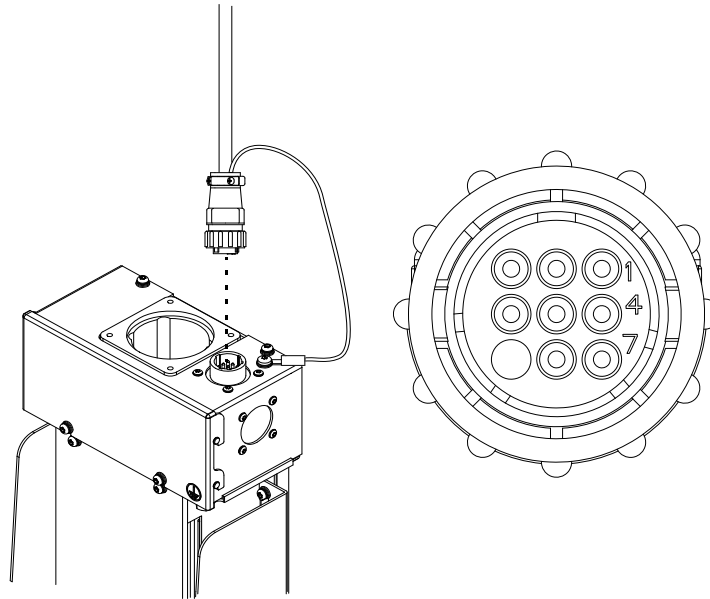
Data plate

The data plate shows the lifter's part number and serial number. If you contact Hypertherm Technical Service, they ask for this information.



- 1 Part number
- 2 Serial number (YYMM#####, where YY is the year and MM is the month of manufacture)
- 3 Serial number bar code

Lifter interface cable



The lifter interface cable connects the lifter interface board and the lifter drive. See *Table 7* on page 48 for pinout information.

Table 3 – Lifter interface cables

Part number	Description	Quantity
223472	8 m (25 ft)	1
223473	15 m (50 ft)	1
223614	30 m (100 ft)	1

Motors and drives

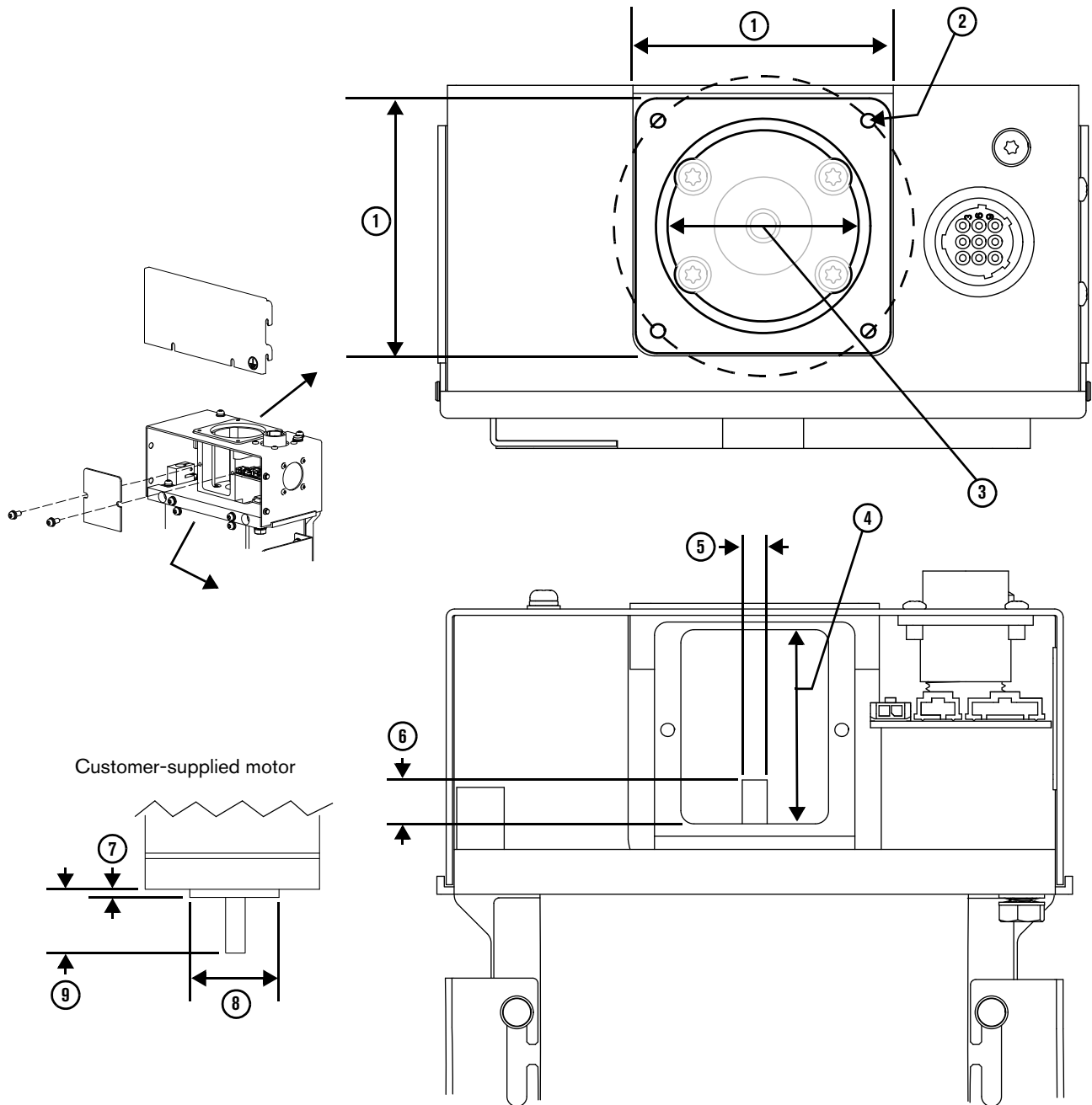
Hypertherm does not offer a drive, motor, brake, or motor cables for the lifter.



We strongly recommend a motor and brake combination.

To select a compatible motor, see *Figure 2* on page 32 for the motor mount specifications. Select a drive that is compatible with your motor.

Figure 2 – Motor mount specifications



- 1 Motor mount flange: 60 mm (2.362 in.) square
- 2 Screws: four M4 X 0.70 mm screws on 70 mm (2.756 in.) bolt circle diameter
- 3 Coupling maximum diameter: 41 mm (1.615 in.)
- 4 Coupling maximum length: 45 mm (1.772 in.)
- 5 Linear slide shaft diameter: 6 mm (0.236 in.)

- 6 Linear side shaft height: 10.6 mm (0.416 in.)
- Customer-supplied motor specifications:
- 7 Pilot maximum length: 3.56 mm (0.140 in.)
 - 8 Pilot maximum diameter: 50.50 mm (1.988 in.)
 - 9 Motor shaft maximum length: 42.55 mm (1.675 in.)

Motor couplings

Couplings join the linear slide shaft and the motor shaft. Hypertherm supplies 2 flexible couplings (031165 and 031164). If you supply your own coupling, see *Figure 2* for coupling specifications.



For a strong connection, make sure that when you insert the linear slide shaft and the motor shaft into the coupling, each of them reaches at least past the coupling screws.

Figure 3 – Hypertherm couplings

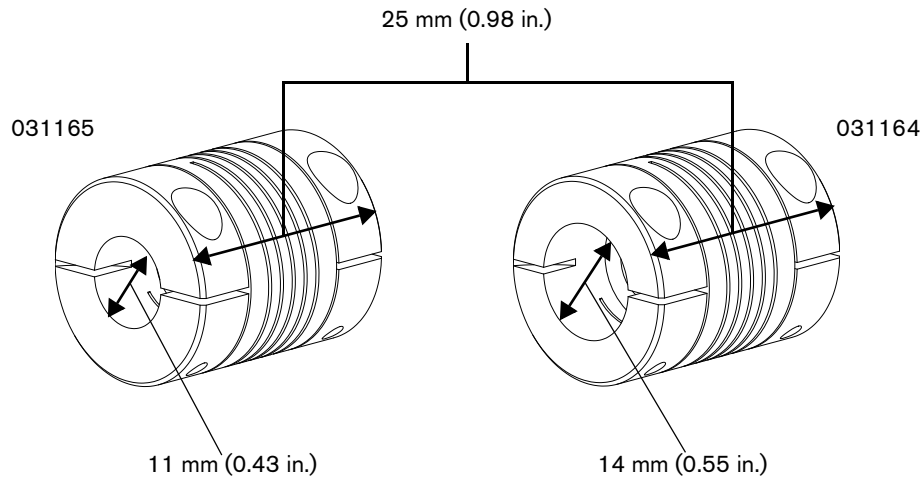


Table 4 – Hypertherm couplings

Part number	Description
031165	25 mm (0.98 in.) flexible coupling with 11 mm (0.43 in.) motor shaft diameter
031164	25 mm (0.98 in.) flexible coupling with 14 mm (0.55 in.) motor shaft diameter
Coupling screws hex head size is 2.50 mm (0.098 in.), with a torque rating of 9.2 kg·cm (8.0 in·lb).	

Replacement parts

Lifter parts

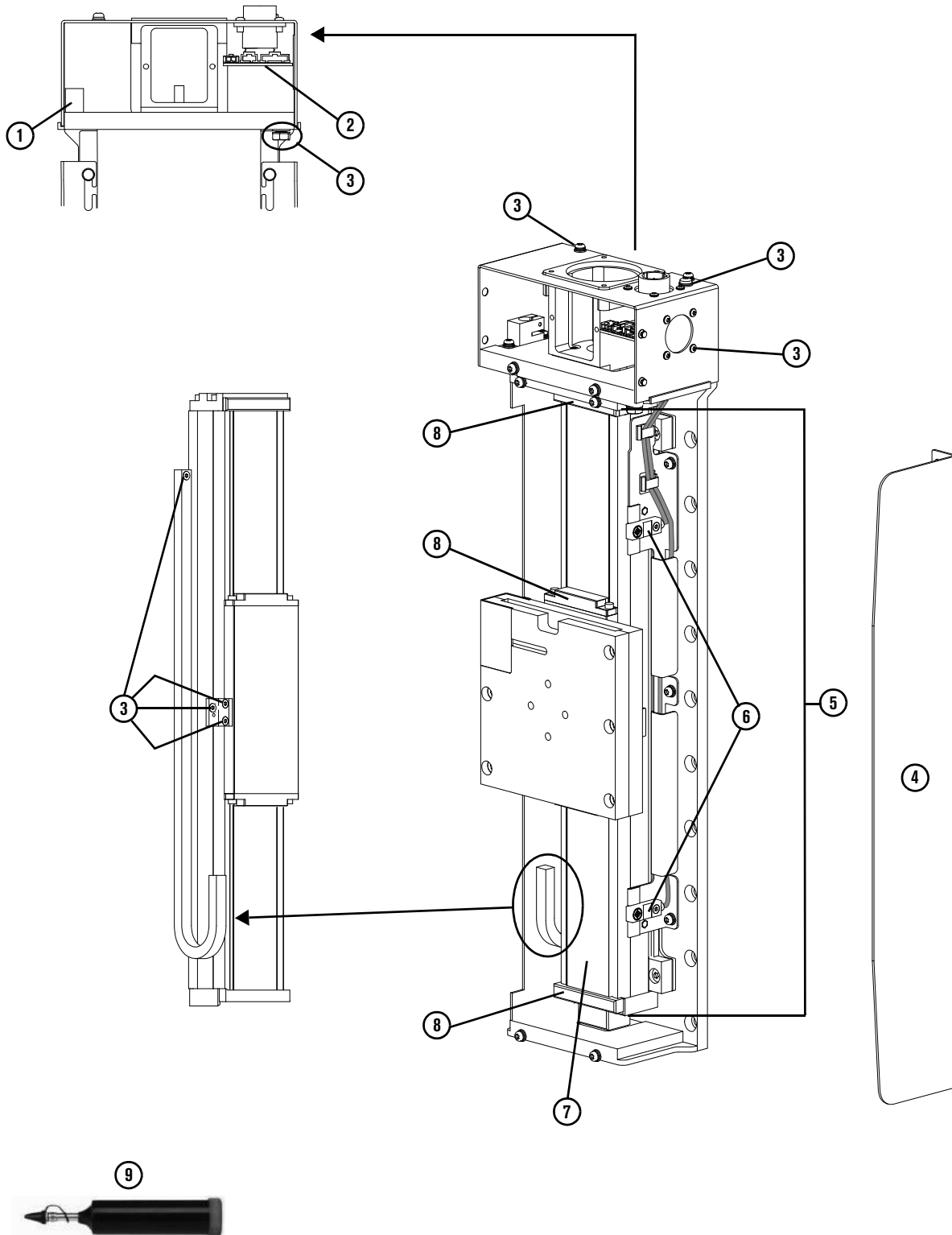


Table 5 – Replacement lifter parts

Item	Kit number	Description	Quantity
1	428453	Laser pointer	1
2	428452	Interface board	1
3	428651	Exterior hardware: <ul style="list-style-type: none"> ▪ Ground hex head bolt (1) and washers (2) ▪ Lifter screws (18) ▪ Interface cable ground screw (1) ▪ Interface cable connector screws (4) ▪ Breakaway cable track and bracket screws (4) 	30
4	428449	Side shields	2
5	428451	Slide	1
6	428450	Upper/lower limit switch	1
7	428612	Sealing strip	1
8	127505	Sealing strip hardware	1
9	428611	Grease gun	1

Breakaway parts

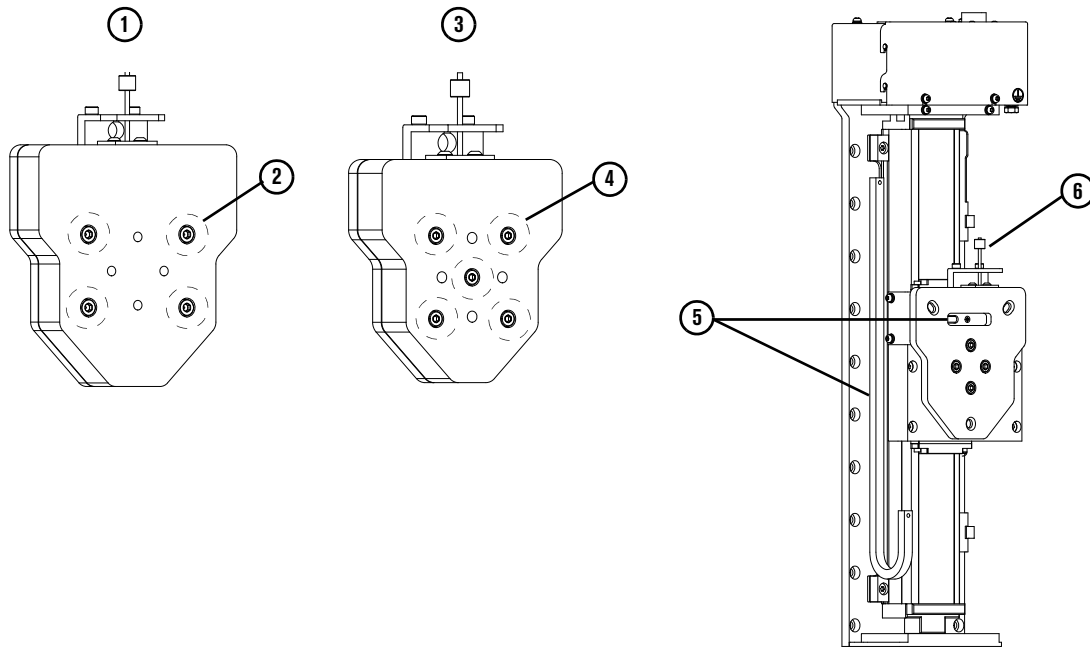


Table 6 – Breakaway replacement parts

Item	Kit number	Description	Quantity
1	428606	11.34 kgf (25 lbf) magnetic breakaway	1
2	104473	35.7 kgf (78.7 lbf) replacement magnet for 11.34 kgf (25 lbf) magnetic breakaway	1
2	428610	35.7 kgf (78.7 lbf) replacement magnets for 11.34 kgf (25 lbf) magnetic breakaway (set of 4)	4
3	428607	4.54 kgf (10 lbf) magnetic breakaway	1
4	104513	20 kgf (45 lbf) replacement magnet for 4.54 kgf (10 lbf) magnetic breakaway	1
4	428609	20 kgf (45 lbf) replacement magnets for 4.54 kgf (10 lbf) magnetic breakaway (set of 5)	5
5	428448	Breakaway cable and sensor	1
6	428608	Magnetic breakaway retaining tether	1

Wiring diagram

See Figure 4.

Figure 4

