SKI-DOO KIT - MULTIMOUNT WINCH 2500

Product:	**Ski-Doo**
Project no:	**487803106_rev2**
Instruction Sheet P/N:	**487803106**
Revision no:	**2**
Revision date:	**October, 2021**
Item covered:	**MULTIMOUNT WINCH 2500**

The following symbols may be used in this document:

WARNING
Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a hazard situation which, if not avoided, could result in minor or moderate injury.

NOTICE Indicates an instruction which, if not followed, could severely damage vehicle components or other property.

WARNING
- For safety reasons, this kit must be installed by an authorized BRP dealer.
- This kit is designed for specific applicable models only (authorized BRP dealers will confirm model(s)). It is not recommended for units other than the one (those) for which it was sold.
- Should removal of a locking device (e.g. lock tabs, self-locking fasteners, etc.) be required when undergoing disassembly/ assembly, always replace with a new one.
- Torque wrench tightening specifications must strictly be adhered to.
- Always wear EYE PROTECTION AND APPROPRIATE GLOVES when using power tools.
- Unless otherwise specified, engine must be OFF when performing any operation on the vehicle.
- Always be aware of parts that can move, such as wheels, transmission components, etc.
- Some components may be HOT. Always wait for engine to cool down before performing work.

WARNING
Some important safety information and/or operating instructions dedicated to the end user might be included in this instruction sheet. Make sure to give the kit part number as well as the instruction sheet included with this kit to the customer. Verify that the customer has access to all the information required for proper use of the accessory.

NOTE: USE TIGHTENING TORQUES IN THE FOLLOWING TABLE IF NOT OTHERWISE SPECIFIED.

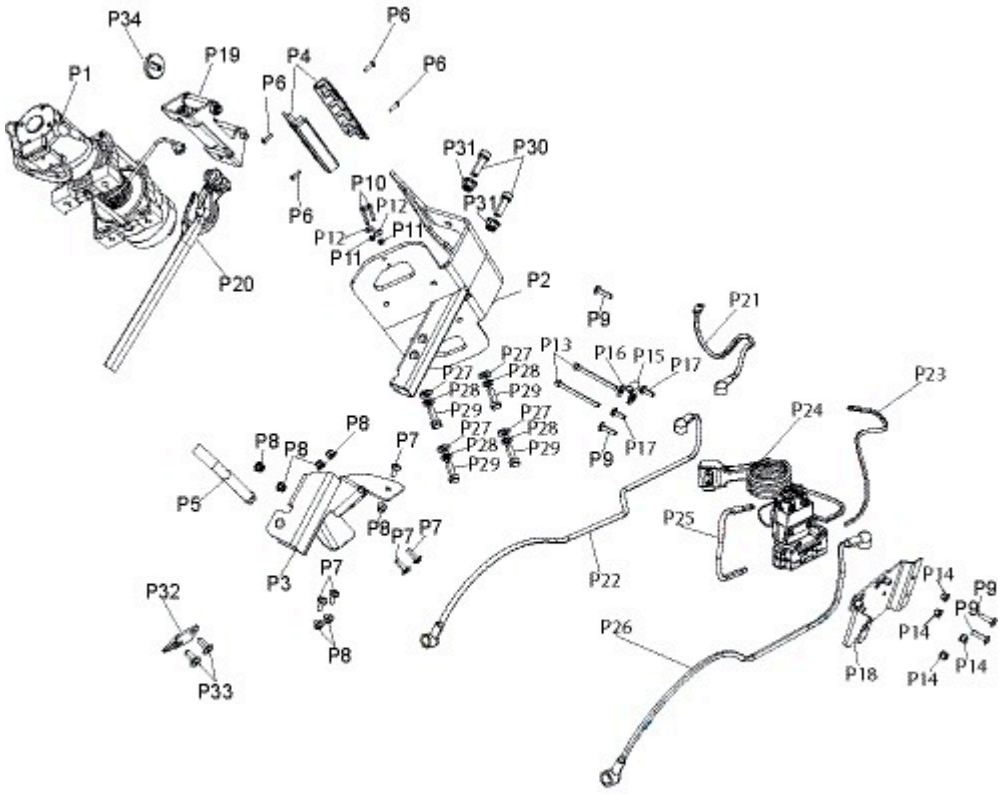
	GRADE			
	5.8	8.8	10.9	12.9
M4	1.8 ± 0.2 N•m (16 ± 2 lbf•**in**)	2.8 ± 0.2 N•m (25 ± 2 lbf•**in**)	3.8 ± 0.2 N•m (34 ± 2 lbf•**in**)	4.5 ± 0.5 N•m (40 ± 4 lbf•**in**)
M5	3.3 ± 0.2 N•m (29 ± 2 lbf•**in**)	5 ± 0.5 N•m (44 ± 4 lbf•**in**)	7.8 ± 0.7 N•m (69 ± 6 lbf•**in**)	9 ± 1 N•m (80 ± 9 lbf•**in**)
M6	7.5 ± 1 N•m (66 ± 9 lbf•**in**)	10 ± 2 N•m (89 ± 18 lbf•**in**)	12.8 ± 2.2 N•m (113 ± 19 lbf•**in**)	16 ± 2 N•m (142 ± 18 lbf•**in**)
M8	15.3 ± 1.7 N•m (135 ± 15 lbf•**in**)	24.5 ± 3.5 N•m (18 ± 3 lbf•ft)	31.5 ± 3.5 N•m (23 ± 3 lbf•ft)	40 ± 5 N•m (30 ± 4 lbf•ft)
M10	29 ± 3 N•m (21 ± 2 lbf•ft)	48 ± 6 N•m (35 ± 4 lbf•ft)	61 ± 9 N•m (45 ± 7 lbf•ft)	73 ± 7 N•m (54 ± 5 lbf•ft)
M12	52 ± 6 N•m (38 ± 4 lbf•ft)	85 ± 10 N•m (63 ± 7 lbf•ft)	105 ± 15 N•m (77 ± 11 lbf•ft)	128 ± 17 N•m (94 ± 13 lbf•ft)

M14	85 ± 10 N•m (63 ± 7 lbf•ft)	135 ± 15 N•m (100 ± 11 lbf•ft)	170 ± 20 N•m (125 ± 15 lbf•ft)	200 ± 25 N•m (148 ± 18 lbf•ft)
M16	126 ± 14 N•m (93 ± 10 lbf•ft)	205 ± 25 N•m (151 ± 18 lbf•ft)	255 ± 30 N•m (188 ± 22 lbf•ft)	305 ± 35 N•m (225 ± 26 lbf•ft)
M18	170 ± 20 N•m (125 ± 15 lbf•ft)	273 ± 32 N•m (201 ± 24 lbf•ft)	330 ± 25 N•m (243 ± 18 lbf•ft)	413 ± 47 N•m (305 ± 35 lbf•ft)

The illustrations in this document show typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts; however, they represent parts that have the same or similar function.
Installation time is approximately 0.8 hour.
Required Tools

	Required Tool		Use
T1	Drill bit 5.5 mm (7/32 in)	———	To drill the storage box
T2	Drill bit 6.5 mm (1/4 in)	———	To drill the frame

parts to be installed



ITEM	DESCRIPTION	Part number	QTY
P1	Electric winch	Not available separately	1
P2	Detachable winch support	520001935	1
P3	Welded support	Not available separately	1
P4	Handle	520001421	2
P5	Hitch pin	515178922	1
P6	K40 x 16 Phillips screw	250000723	4

P7	M6 x 18 Torx screw	250000779	5
P8	M6 Hex flange nut	233261494	7
P9	M5 x 20 Torx screw	250000724	4
P10	M4 x 25 Socket screw	205042594	2
P11	M4 Hex elastic nut	232541600	2
P12	M4 Flat washer	234042600	2
P13	M5 x 60 Socket screw	205056060	2
P14	M5 Hex flange elastic nut	233251494	4
P15	Bracket	415052400	1
P16	M5 Flat washer	250200025	1
P17	M5 x 14 Torx screw	250000742	4
P18	Plate	Not available separately	1
P19	Roller Fairlead	Not available separately	1
P20	Hook	Not available separately	1
P21	Black Cable	Not available separately	1
P22	Cable	Not available separately	1
P23	Red cable (long 330mm)	Not available separately	1
P24	Remote handheld	Not available separately	1
P25	Red cable (short 225mm)	Not available separately	1
P26	Black cable	Not available separately	1
P27	M8 Flat washer	Not available separately	4
P28	M8 Lock washer	Not available separately	4
P29	M8 x 25 Hex screw	Not available separately	4
P30	M10 x 30 Socket screw	Not available separately	2
P31	M10 Hex lock flange nut	Not available separately	2
P32	Winch shim plate	Not available separately	1
P33	M6 x 25 Hex screw	Not available separately	2
P34	Stopper	710007028	1

Service kit

Description	Part Number
Hook kit	705014949
Solenoid kit	710007073
Cable kit	705014983
Distance remote control kit	515178827
Roller Fairlead kit	715006505
Clutch kit	715006440

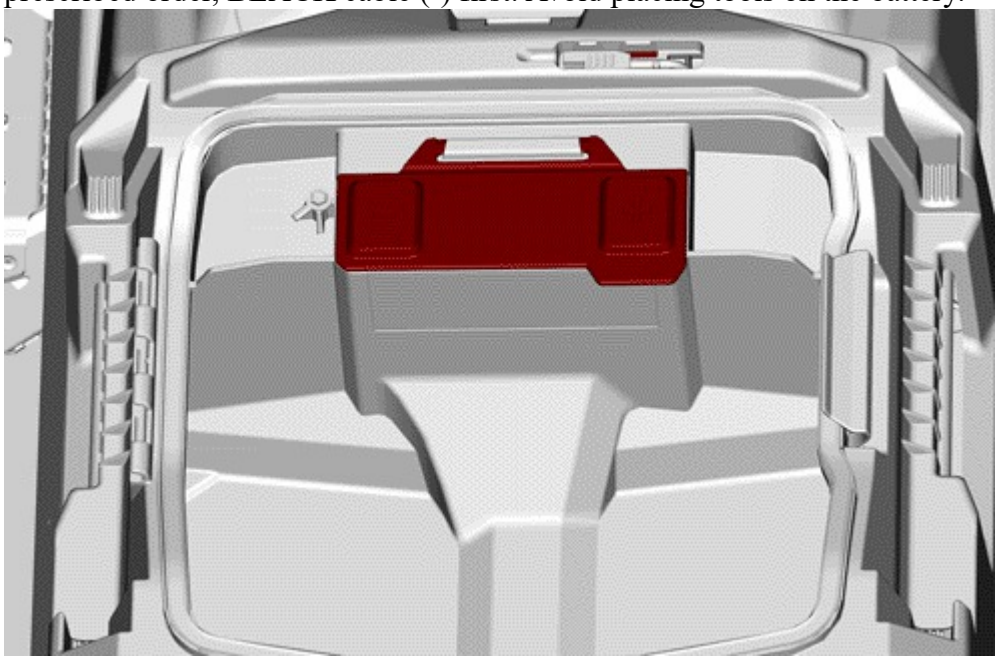
instructions

NOTE: This kit may be used without the heavy duty rear bumper. The unit out of production is able to take the load of the 2500-lb winch.

Disconnecting the battery

Remove the cover on the battery and disconnect the battery.

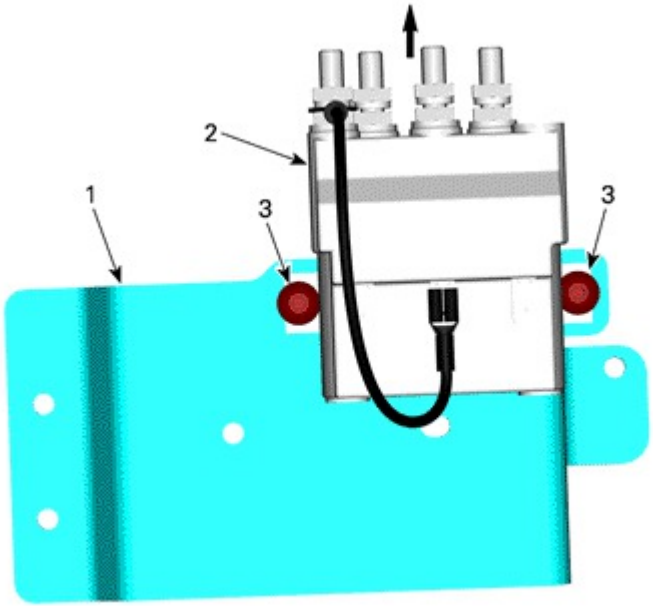
NOTICE Always disconnect the battery before installing electrical components. Always disconnect in the prescribed order, BLACK cable (-) first. Avoid placing tools on the battery.



Preparation of the electrical elements on the plate

Solenoid installation on plate

Install solenoid with M5 x 14 Torx screw [P17] on the plate [P18]. The terminals must be positioned upwards, shown as below.



Components

1. Plate [P18]
2. Solenoid
3. M5 x 14 Torx screw [P17]

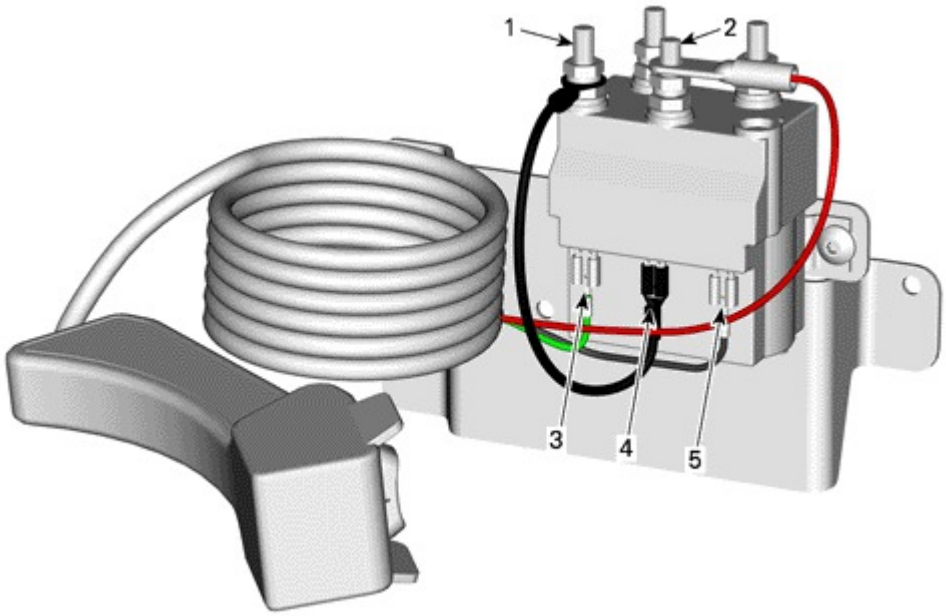
Tightening torque

M5 X 14 Torx screws [P17]	2 ± .25 N•m (18 ± 2 lbf•**in**)

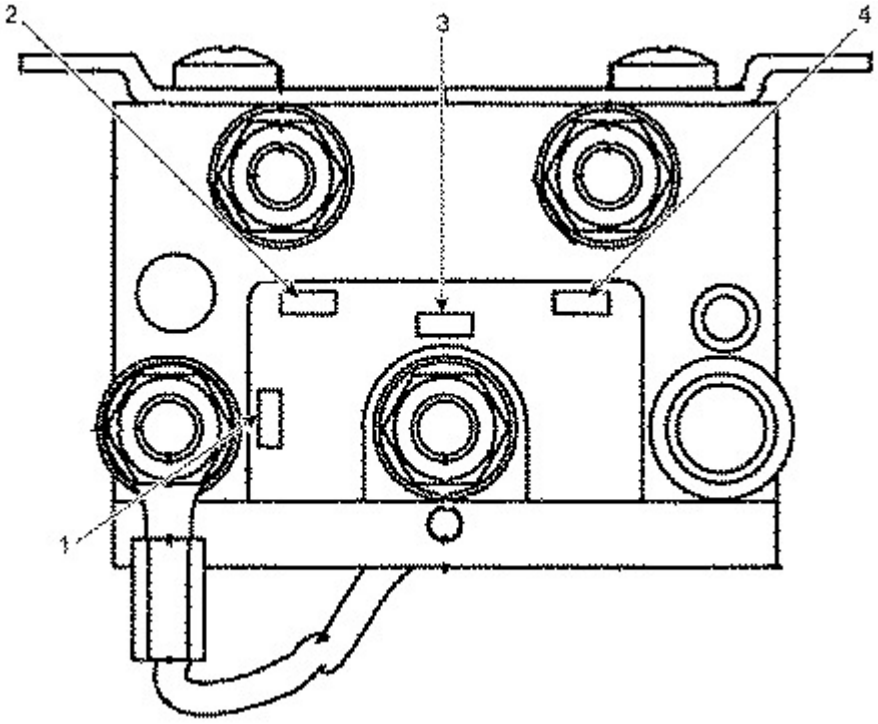
Connecting the remote control to the solenoid

1. Fix the GREEN cable of the remote control on connector of solenoid.
2. Fix the BLACK cable of the remote control on connector of solenoid.
3. Fix the RED cable of the remote control on RED terminal of the solenoid.
4. Check if the BLACK jumper cable is installed between connector at the center and BLACK terminal.

5. Apply DIELECTRIC GREASE (P/N 293 550 004) on the connections.



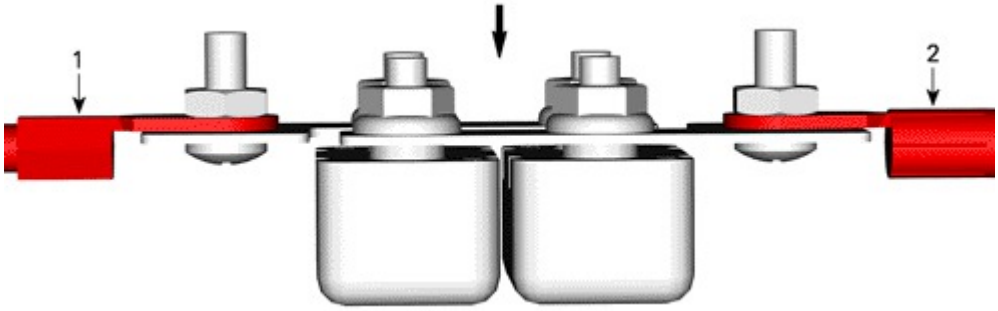
terminals AND CONNECTORS
1. Terminal (BLACK)
2. Terminal (RED)
3. Connector
4. Connector
5. Connector



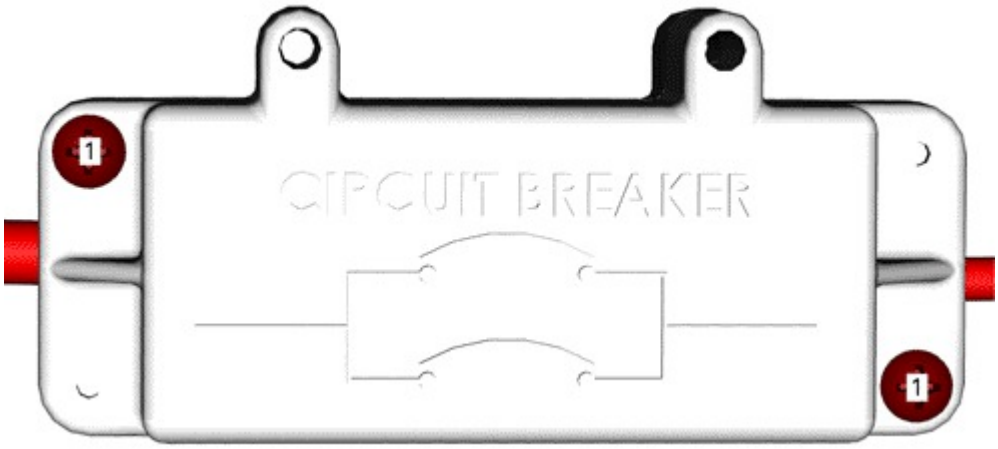
Terminals only
1. Terminal (BLACK)
2. Terminal (YELLOW)
3. Terminal (RED)
4. Terminal (BLUE)

Assembly of the circuit breaker and its box

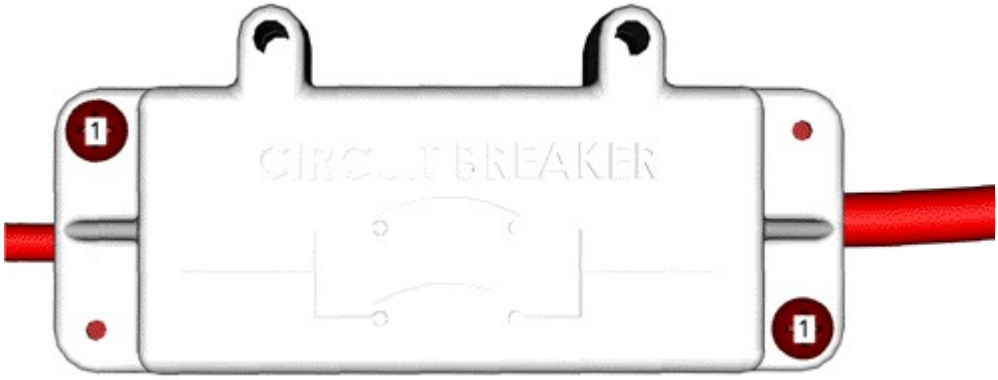
1. Connect the RED cable of 6 ga [P23] (330 mm (12.992 in) long) to the positive terminal (+ mark) of the circuit breaker.
2. Connect the RED cable of 6 ga [P25] (225 mm (8.858 in) long) to the non marked part of the circuit breaker, see figure below.



arrow POINTS AT THE Back
1. 330 mm (12.992 in)
2. 225 mm (8.858 in)
3. Assemble the covers of the circuit breaker using Phillips screw contain in electric winch [P1].



FRONT SIDE
1. Phillips screw

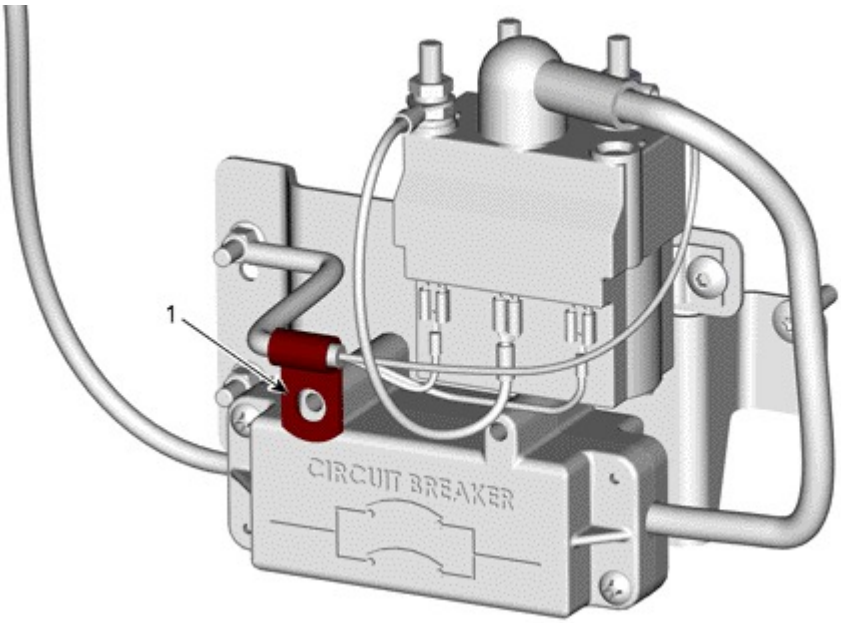


bACK SIDE
1. Philips screw

Tightening torque

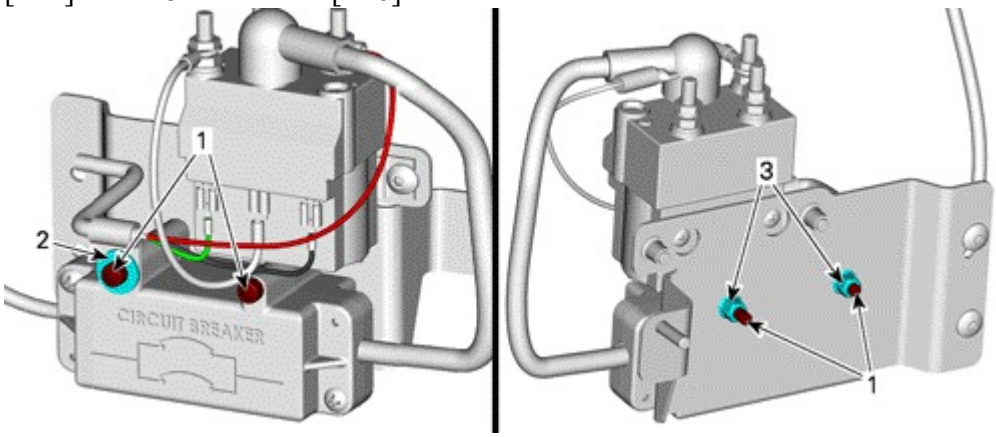
Phillips screw	3.6 to 3.9 N•m (32 to 35 lbf•**in**)

4. Pass the cable of the remote control through the bracket [P15].
Install the RED cable on the solenoid.



1. Bracket [P15]

5. Fix the circuit breaker to the plate [P18] using M5 x 60 Socket screw [P13], M5 Hex flange elastic nut [P14] and M5 flat washer[P16]



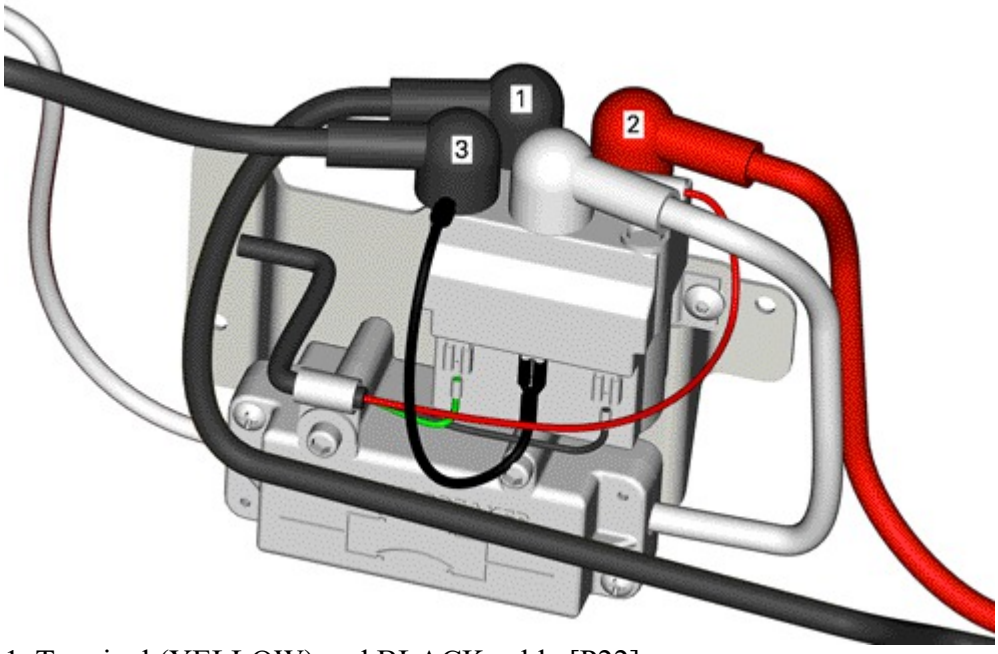
1. M5 x 60 Socket screw [P13]
2. M5 flat washer[P16]
3. M4 Hex flange elastic nut [P14]

Tightening torque

M4 Hex flange elastic nut [P14]	3.5 ± .5 N•m (31 ± 4 lbf•**in**)

Connection of the winch cable and the BLACK cable of the battery to the solenoid

1. Connect the BLACK cable [P22] of 6 ga to the positive (+) YELLOW terminal.
2. Connect the cable [P21] of 6 ga to the negative (-) BLUE terminal of parts.
3. Connect the BLACK cable [P26] to BLACK terminal of the solenoid.
4. Apply DIELECTRIC GREASE (P/N 293 550 004) on the connections.



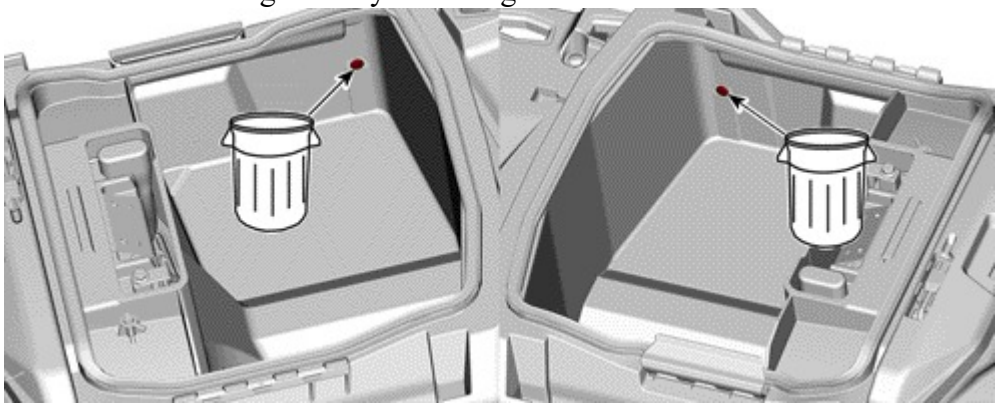
1. Terminal (YELLOW) and BLACK cable [P22]
2. Terminal (BLUE) and cable [P21]
3. Terminal (BLACK) and cable [P26]

Tightening torque

Cable to terminal	3.6 to 3.9 N•m (32 to 35 lbf•**in**)

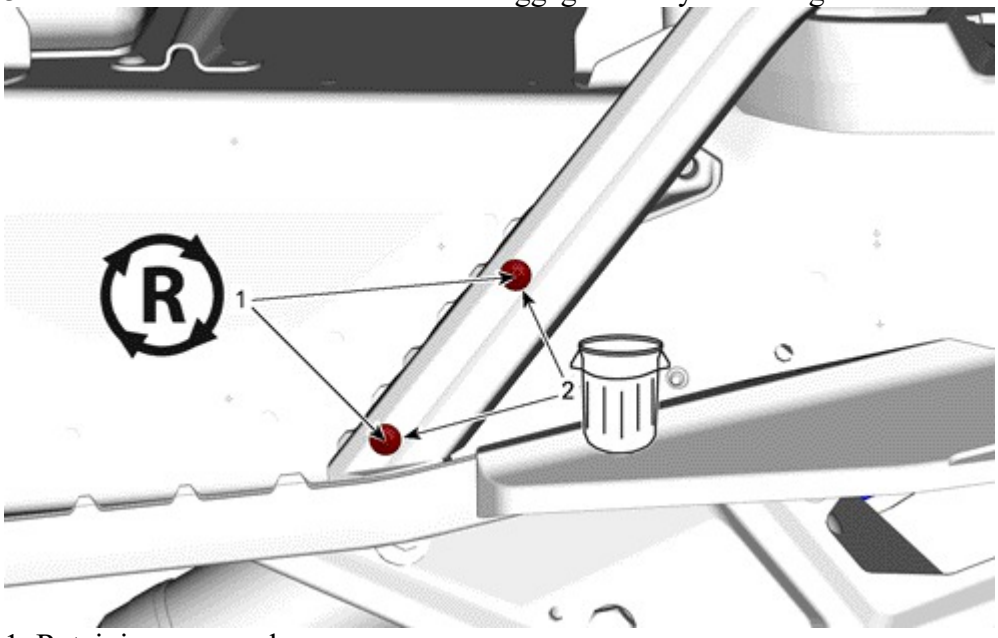
Installation of the transport support

1. Remove the passenger seat.
2. Remove the storage box by removing the two identified screws and discard the screws.



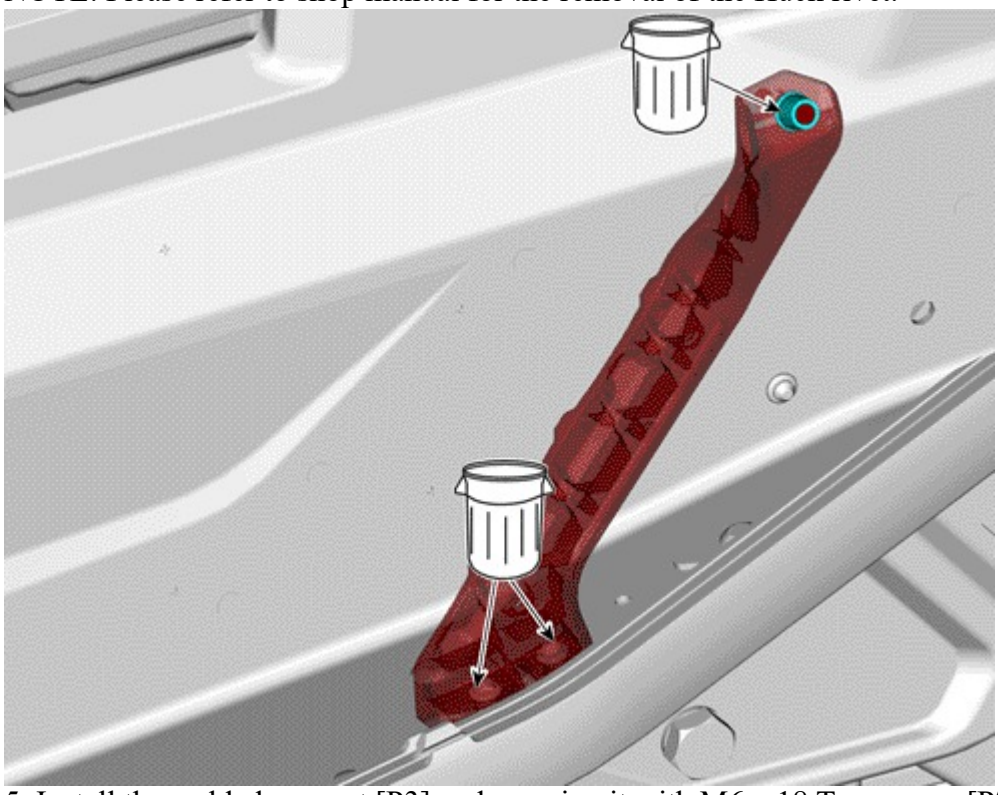
1. Retaining screw - discard

3. Remove the left handed side of the luggage rack by removing screws and nuts. Discard nuts.

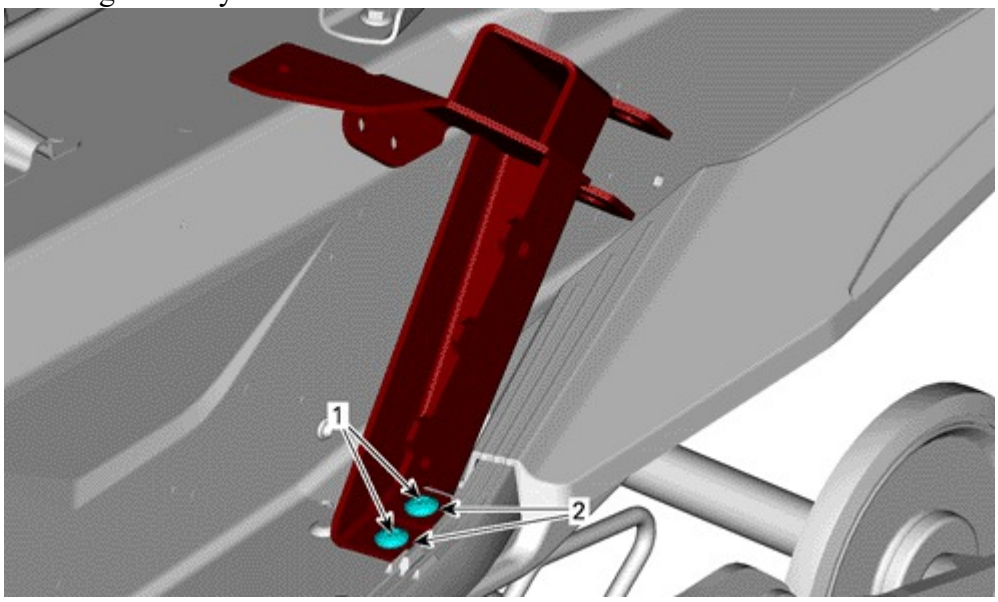


1. Retaining screw - keep

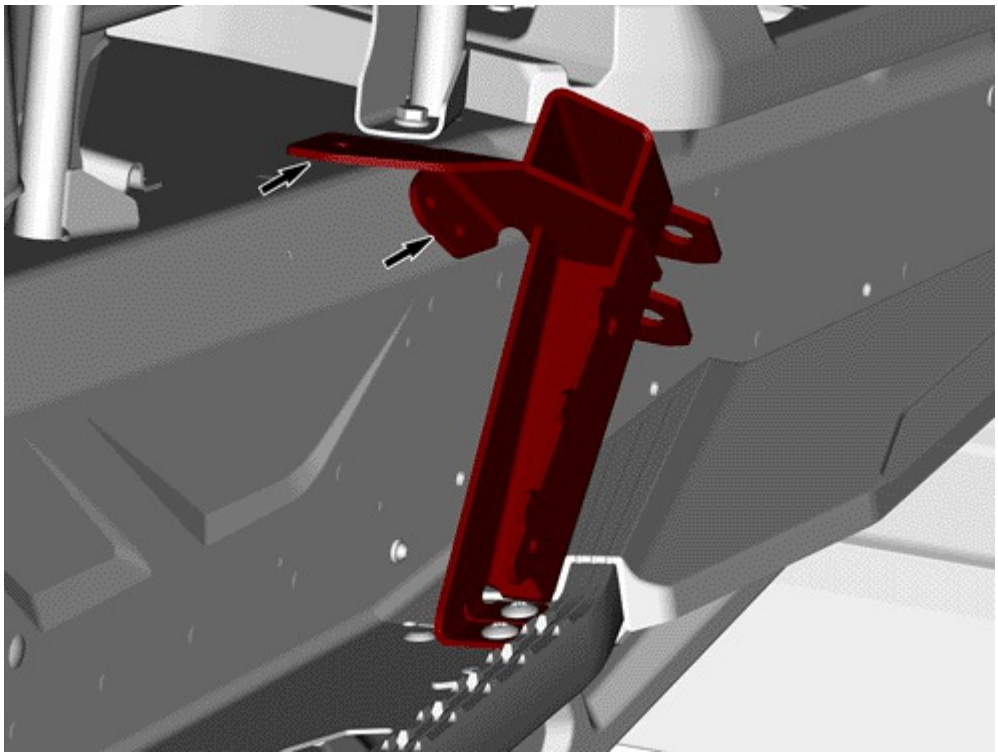
2. Retaining nut - discard
4. Remove the rear footrest by removing rivets and Huck rivet.
NOTE: Please refer to shop manual for the removal of the Huck rivet.



5. Install the welded support [P3] and securing it with M6 x 18 Torx screw [P7] and M6 Hex flange nut [P8]. Hand tighten only.

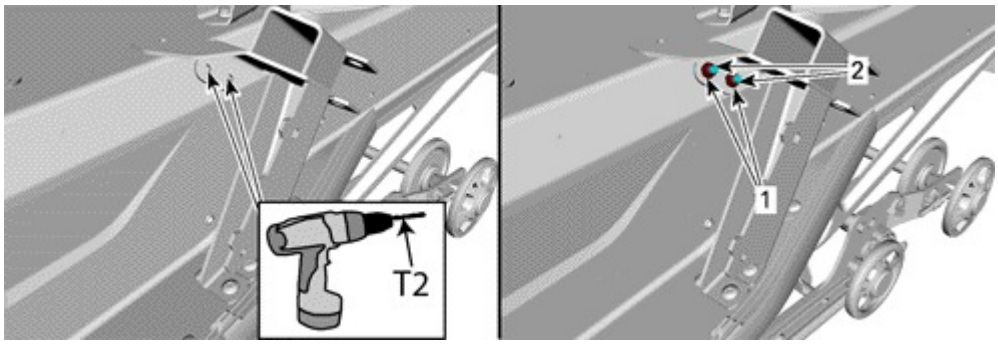


1. M6 x 18 Torx screw [P7]
2. M6 Hex flange nut [P8]
6. Press on the support against the frame ensuring that the two faces identified rest against the frame.



7. Drill two holes of 6.5 mm (.26 in) diameter and fix the support using M6 x 18 Torx screw [P7] and M6 Hex flange nut [P8].

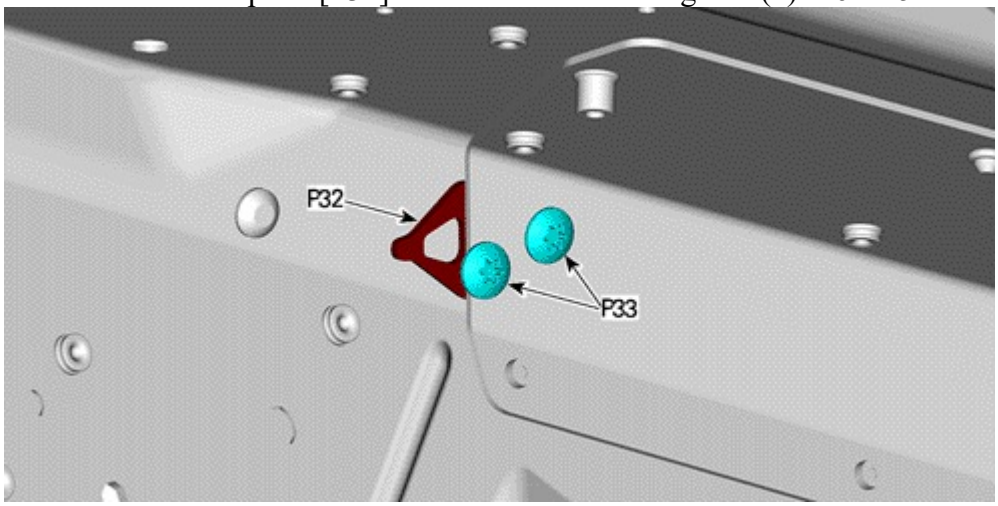
NOTICE The screws must be installed with their heads inside the tunnel.



1. M6 x 18 Torx screw [P7] except super wide track models
2. M6 Hex flange nut [P8]

Super Wide Track models

Install winch shim plate [P32] as shown. Secure using two (2) M6 x 25 screw [P33].



All models

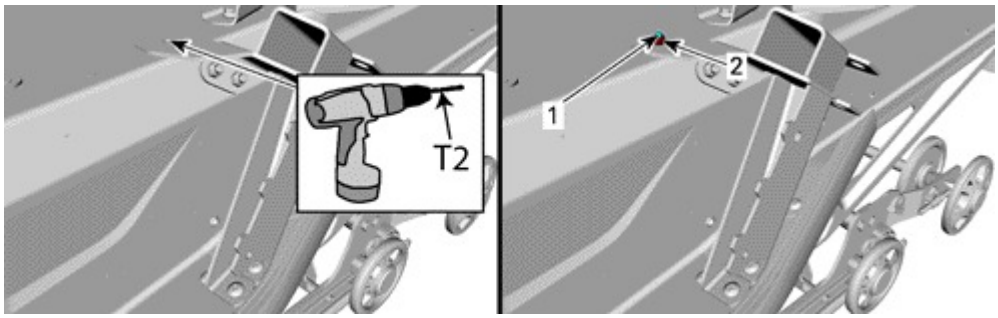
8. Apply the final torque on the previously installed screws and nut.

Tightening torque

M6 Hex flange nut [P8]	7.5 ± 1 N•m (66 ± 9 lbf•**in**)

9. Drill 6.5 mm (.26 in) of diameter and fix using M6 x 18 Torx screw [P7] and M6 Hex flange nut [P8]

NOTICE The screws must be installed with their heads inside the tunnel.

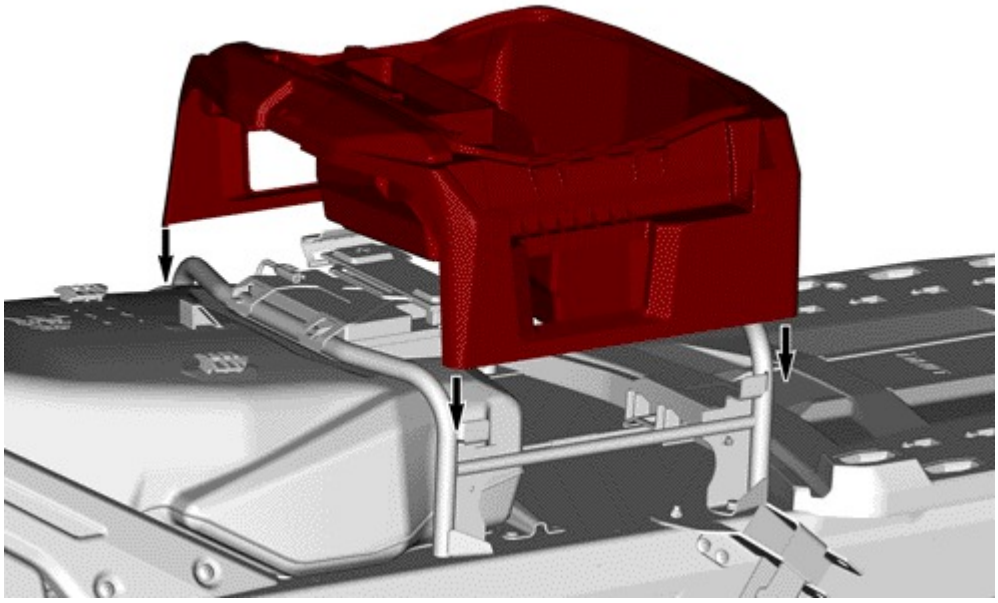


1. M6 x 18 Torx screw [P7]
2. M6 Hex flange nut [P8]

Tightening torque

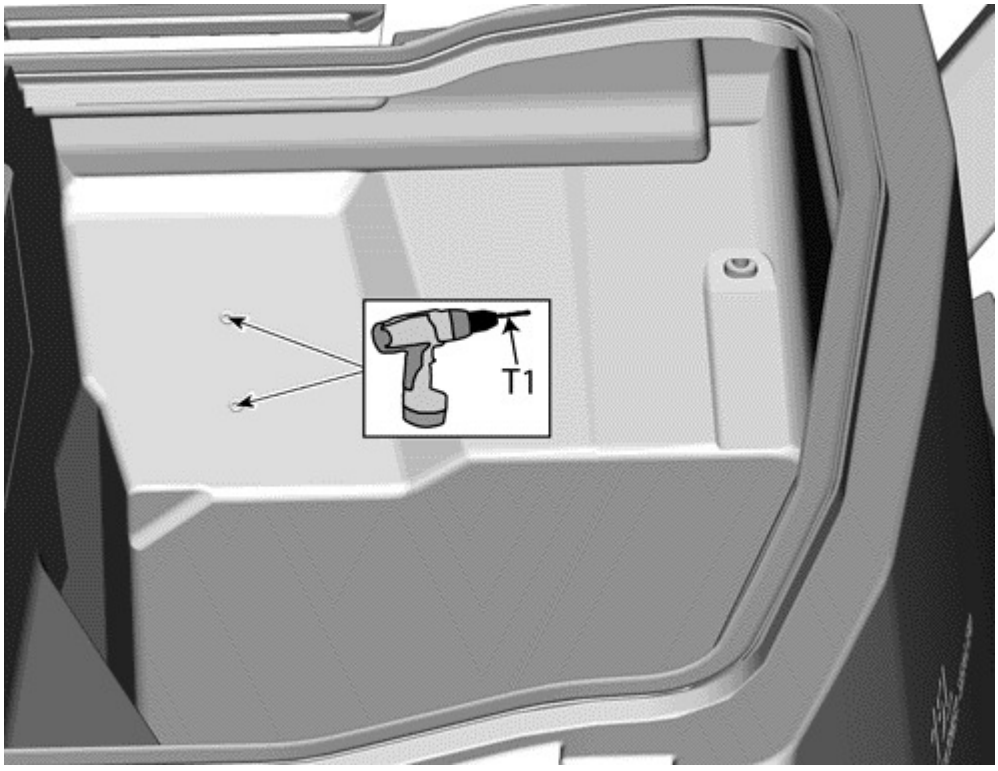
M6 Hex flange nut [P8]	7.5 ± 1 N•m (66 ± 9 lbf•**in**)

10. Reinstall the storage box without any screws.

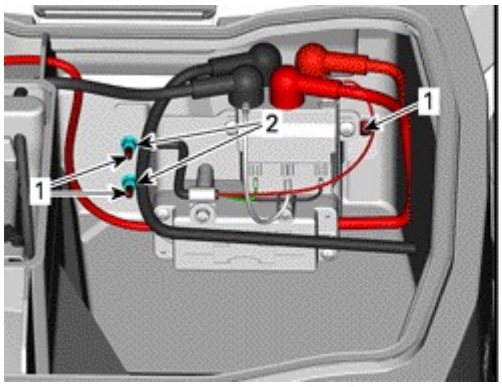


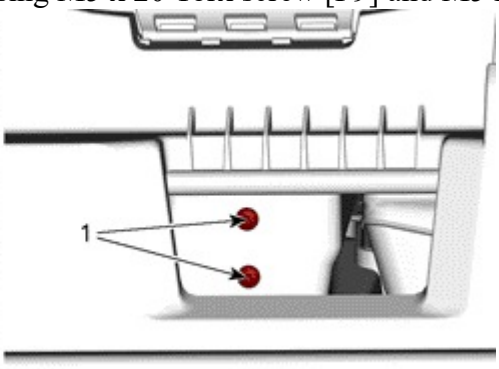
Installation of the electrical kit into the storage box

1. Locate drill marks in the inside of the storage box, on the left side, then drill holes of 5.5 mm (.22 in) of diameter.



2. Install the assembled electrical kit using M5 x 20 Torx screw [P9] and M5 Hex flange elastic nut [P14].



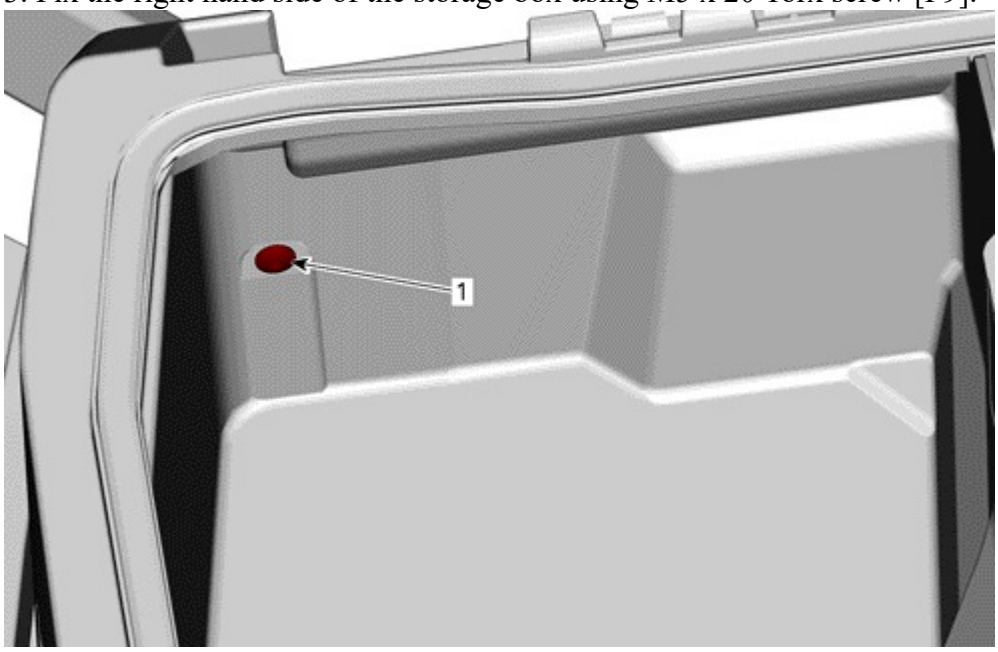


1. M5 x 20 Torx screw [P9]
2. M5 Hex flange elastic nut [P14]

Tightening torque

M5 x 20 Torx screw [P9]	3.5 ± .5 N•m (31 ± 4 lbf•**in**)

3. Fix the right hand side of the storage box using M5 x 20 Torx screw [P9].



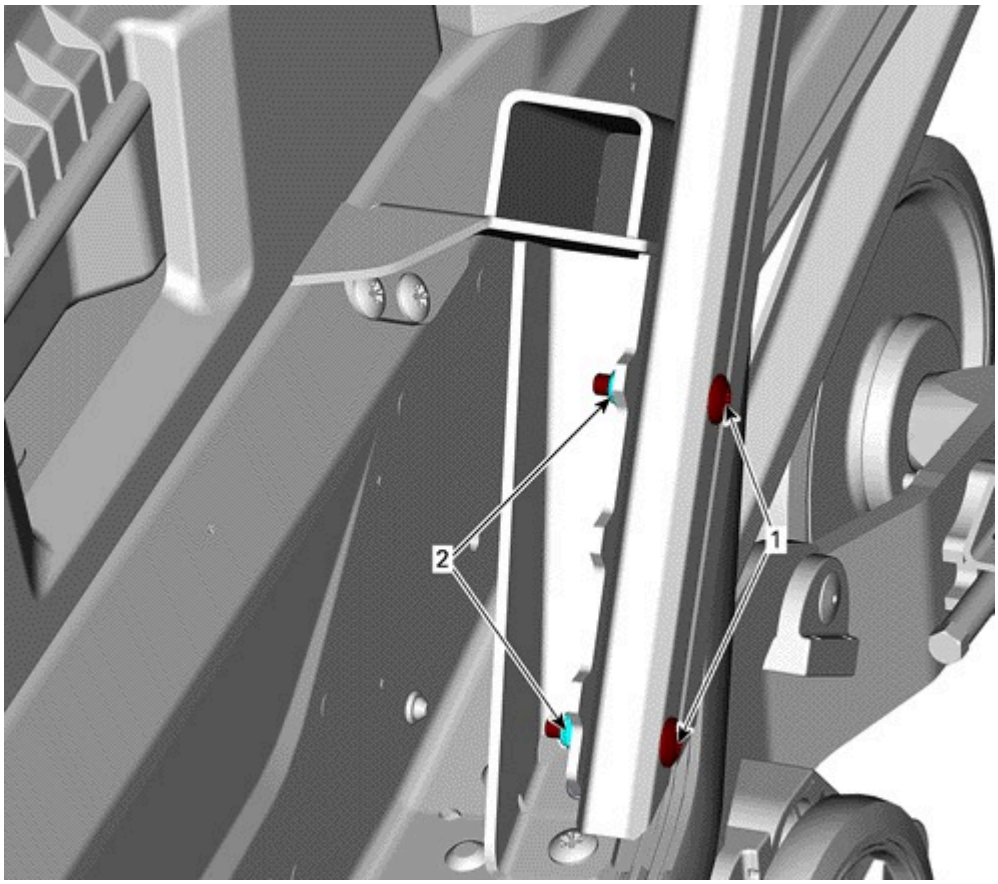
right hand side

1. M5 x 20 Torx screw [P9]

Tightening torque

M5 x 20 Torx screw [P9]	3.5 ± .5 N•m (31 ± 4 lbf•**in**)

4. Reinstall the luggage rack using previously kept screws and M6 Hex flange nut [P8].

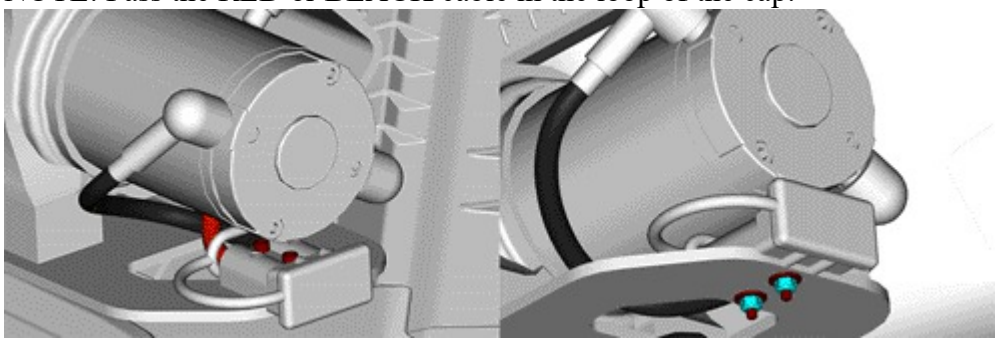


1. Retaining screw - previously kept
2. M6 Hex flange nut [P8]

Assembly of the winch on its support

1. Assemble the outlet to the detachable winch support [P2] with M4 x 25 Socket screw [P10], M4 Flat washer [P12] and M4 Hex elastic nut [P11].

NOTE: Pass the RED or BLACK cable in the loop of the cap.

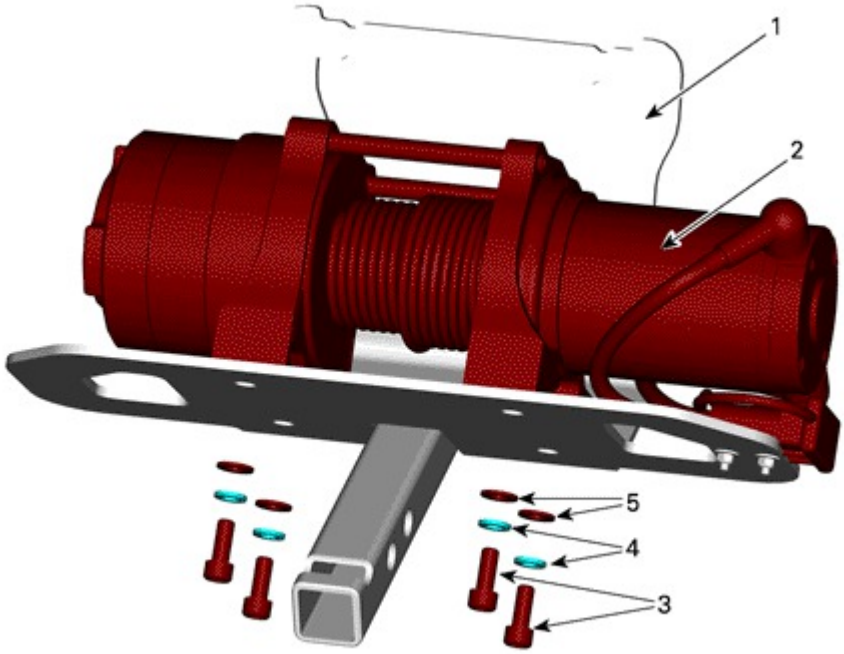


1. M4 Flat washer [P12]
2. M4 Hex elastic nut [P11]
3. M4 x 25 Socket screw [P10]

Tightening torque

M4 Hex elastic nut [P11]	1.5 - 2 N•m (13 - 18 lbf•**in**)

2. Assemble the winch [P1] on the detachable winch support [P2] with M8 flat washer [P27], M8 lock washer [P28] and M8 x 28 hex screw [P29].



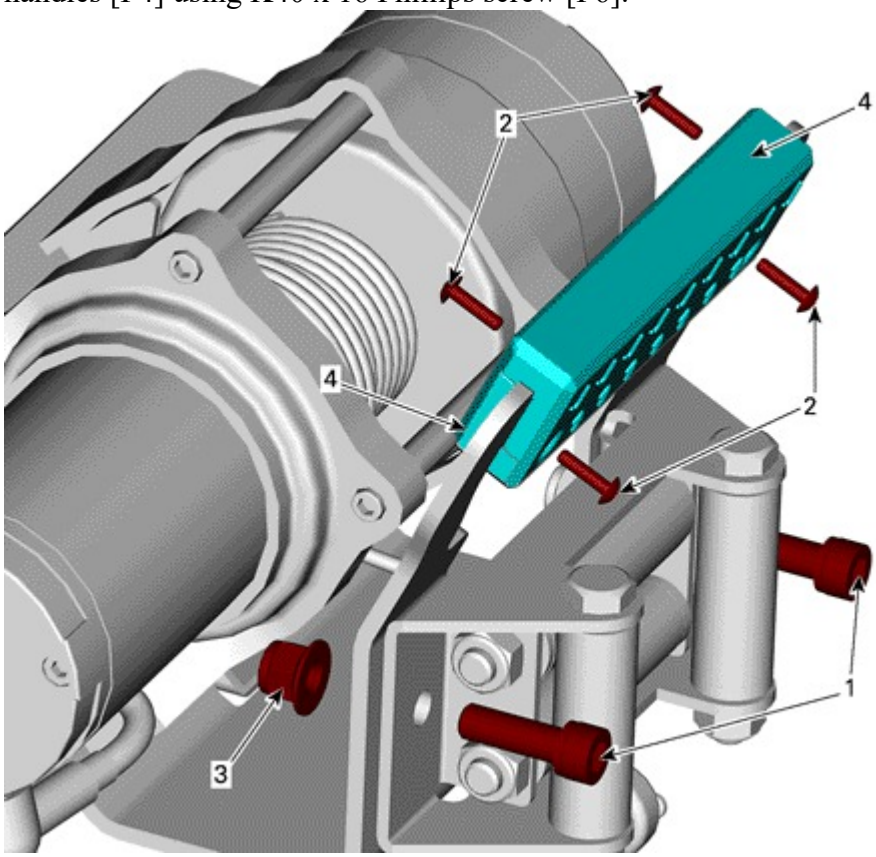
1. Detachable winch support [P2]
2. Electric winch [P1]
3. M8 x 28 hex screw [P29]
4. M8 lock washer [P28]
5. M8 flat washer [P27]

Tightening torque

M8 x 28 hex screw [P29]	24.5 ± 3.5 N•m (18 ± 3 lbf•ft)

Installation of the Roller Fairlead

1. Fix the roller fairlead using M10 x 30 socket screw [P30] and M10 Hex lock flange nut [P31]. Fix the handles [P4] using K40 x 16 Phillips screw [P6].

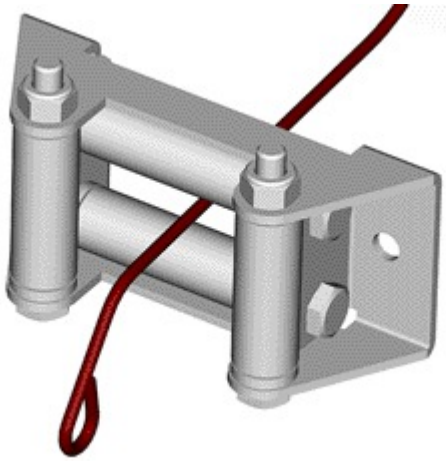


1. M10 x 30 Socket screw
2. K40 x 16 Phillips screw [P6]
3. M10 Nylon lock flange nut
4. Handles [P4]

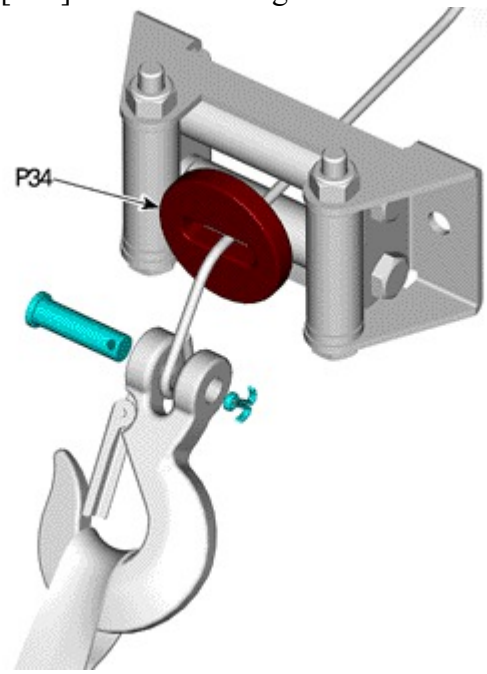
Tightening torque

K40 x 16 Phillips screw [P6]	Hand tighten
M10 Nylon lock flange nut	61 ± 9 N•m (45 ± 7 lbf•ft)

2. Pass the steel cable.

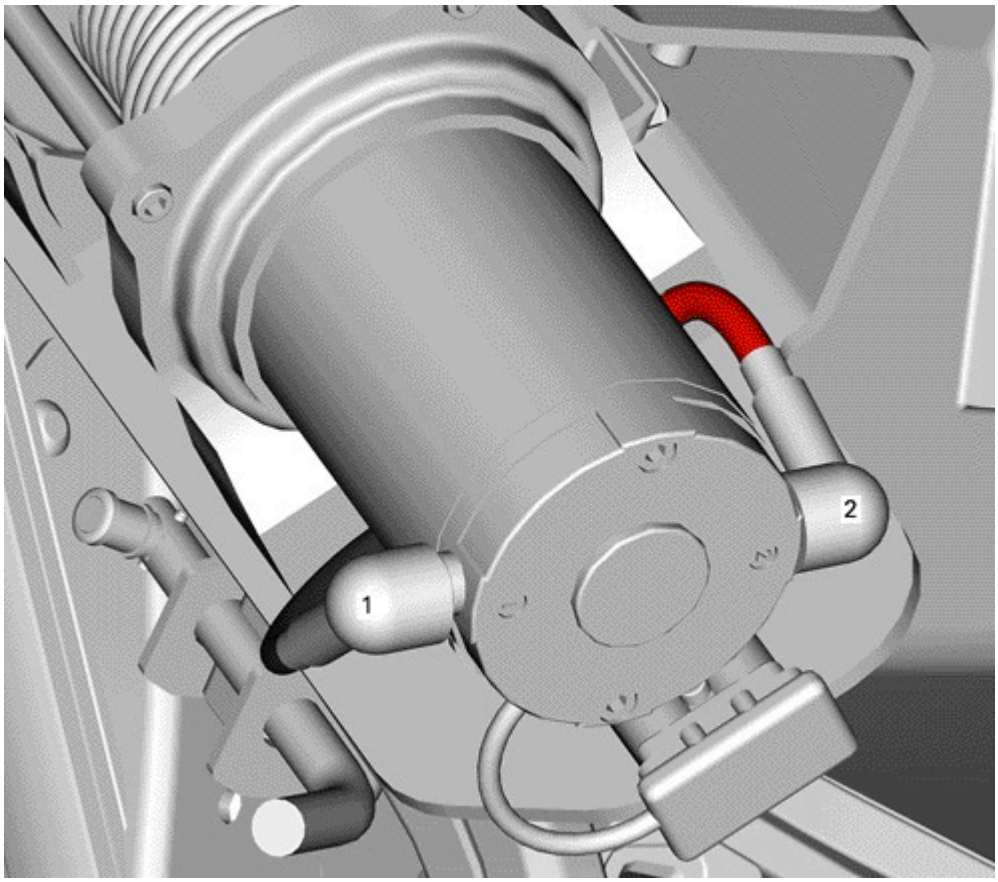


3. Install the stopper [P35] before installing the hook.



Connecting the winch with quick junction

1. Connect the BLACK cable to the YELLOW positive terminal.
2. Connect the RED cable to the BLUE positive terminal.



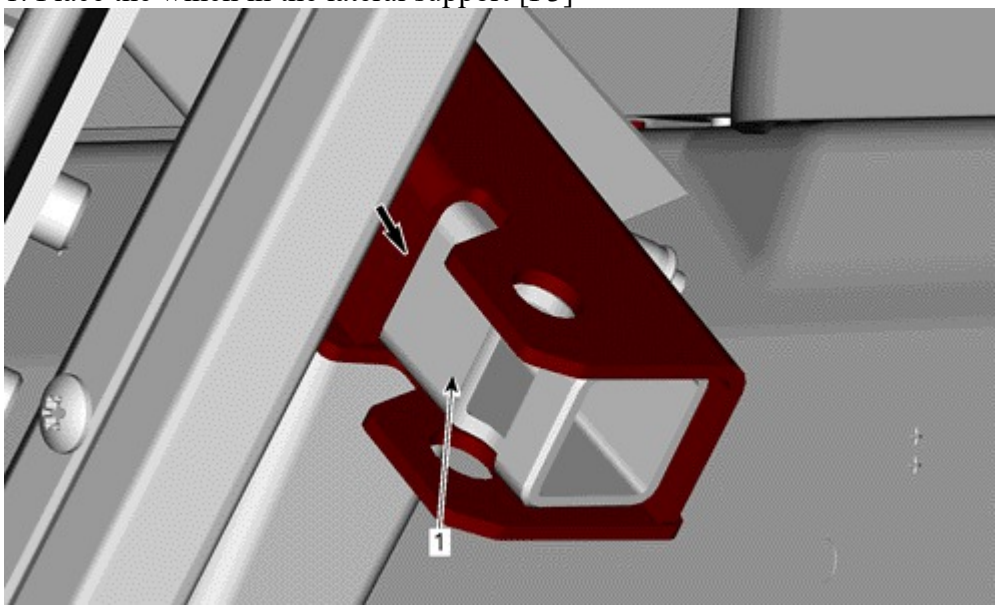
1. YELLOW terminal
2. BLUE terminal
3. Apply DIELECTRIC GREASE (P/N 293 550 004) on the connections.

4 positions of the winch

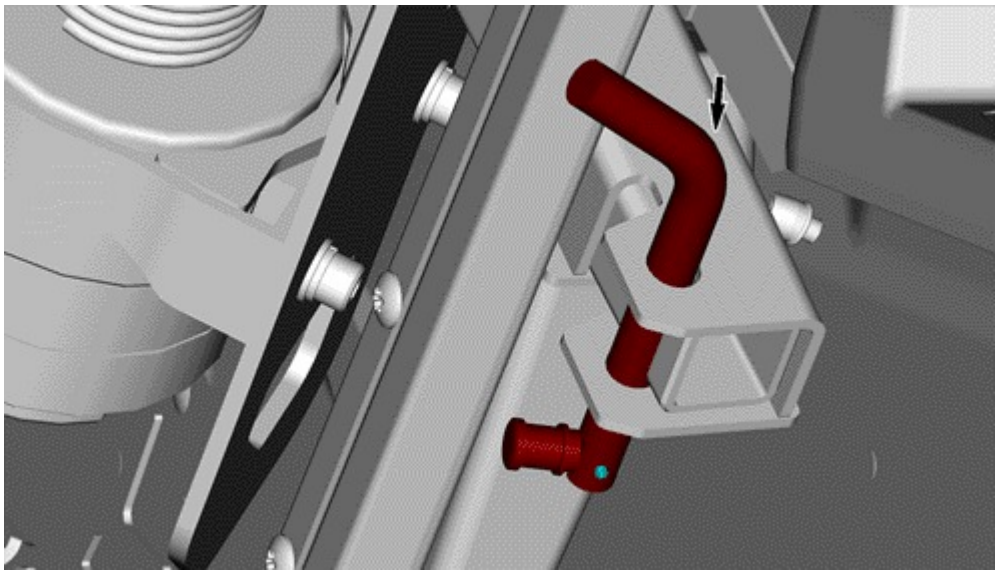
- Transport position: left lateral position
- Front position (front hitch kit (P/N 860201825) is required)
- Rear position with bumper
- Rear position without bumper

Transport position

1. Place the winch in the lateral support [P3]



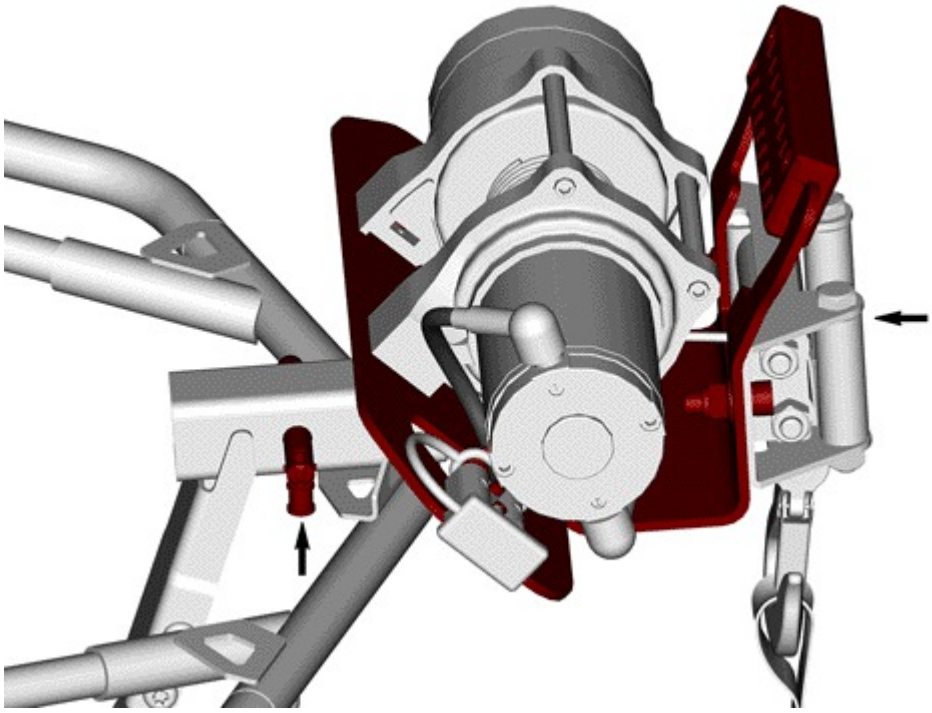
1. Lateral support [P3]
2. Secure the winch using the Hitch pin [P5]



Front position

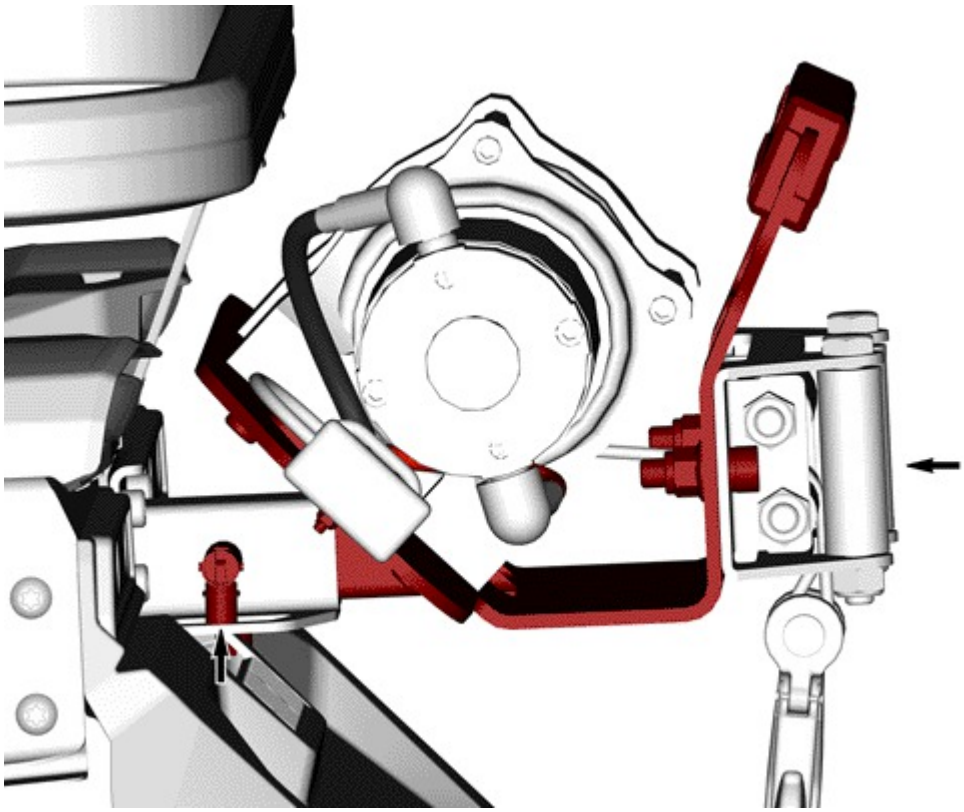
NOTE: Front hitch kit (P/N 860201825) is required.

1. Place the winch in the front support.
2. Secure the winch using the Hitch pin [P5] in the correct position.

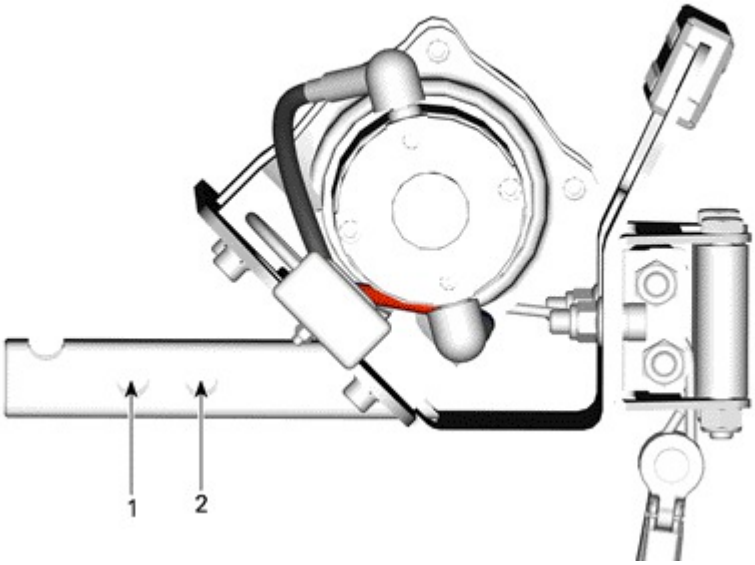


All rear positions

1. Place the winch in the rear support.
2. Secure the winch using the Hitch pin [P5] in the correct hole.



Hole positions



- Hole 1: if winch is installed on vehicle with HD bumper
- Hole 1: if winch installed in front on vehicle with HD bumper
- Hole 2: if winch is installed on vehicle without HD bumper

Cable verification

Check that the entire wiring is clear of sharp edges and pinch points.

Check that all wiring is firmly connected to the appropriate terminals and connectors.

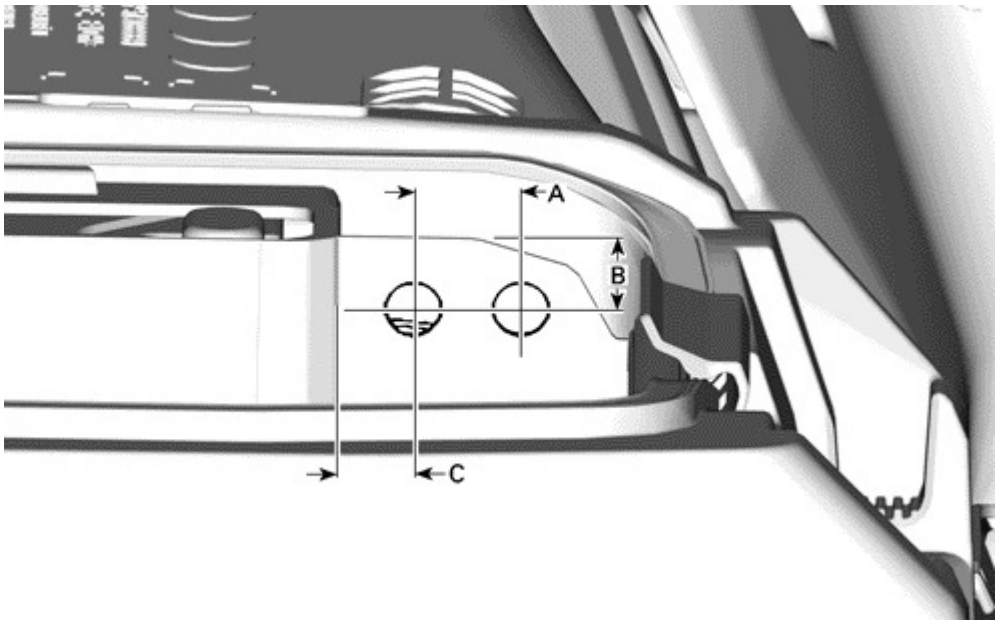
Connecting the battery

Connect the winch to the battery as shown below.

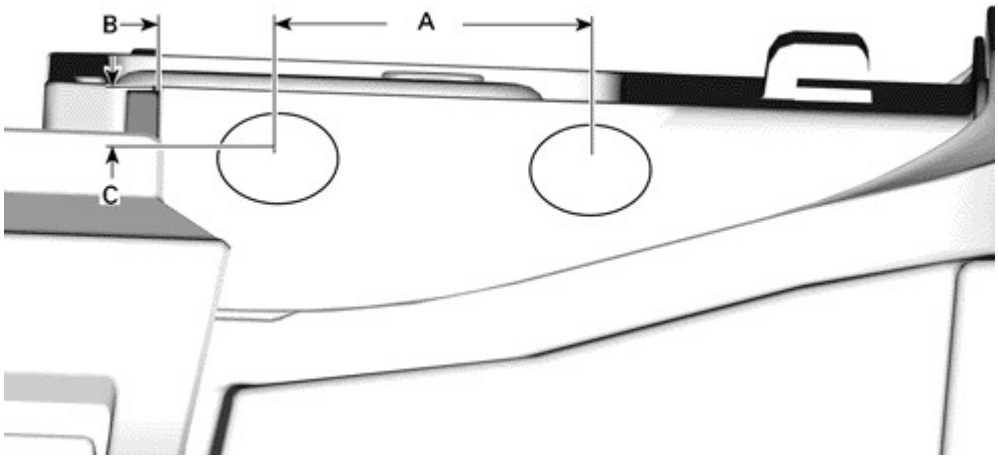
Drilling the holes for the electrical wires

1. Measure and mark the center of the holes to drill.
2. Drill 13 mm (.512 in) diameter hole, take care to deburring the sharp edges of the holes.

NOTICE Do not damage the battery while drilling.

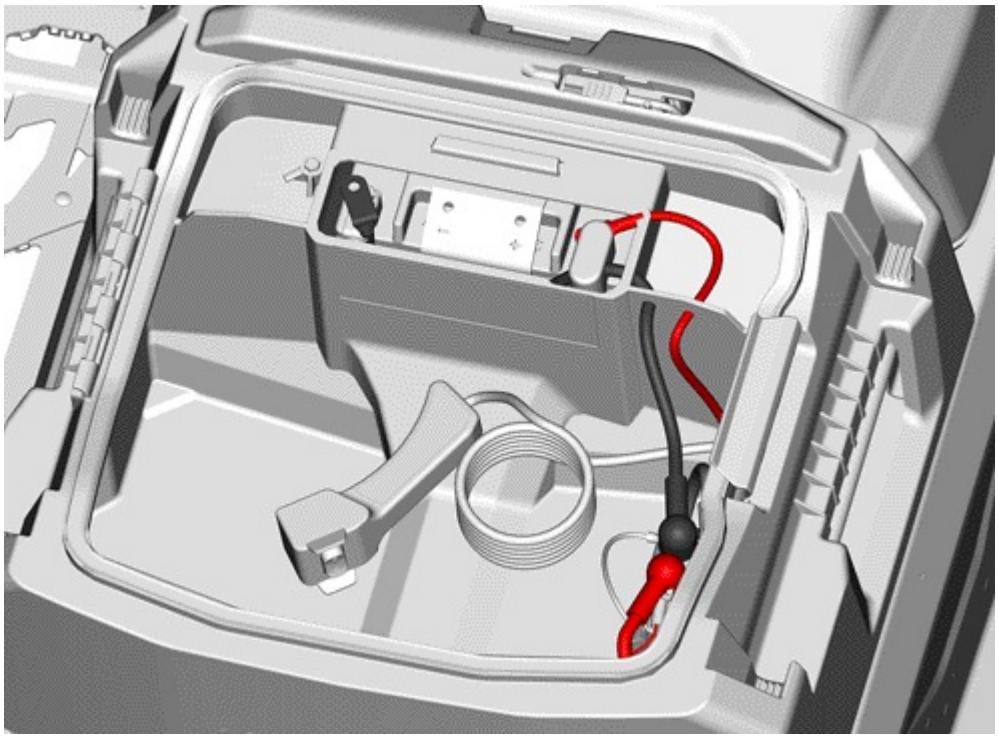


A. 25 mm (.984 in)
B. 15 mm (.591 in)
C. 16 mm (.63 in)



A. 31 mm (1.22 in)
B. 10 mm (.394 in)
C. 10 mm (.394 in)

3. Pass the cable in the previously made holes and connect the RED and BLACK cable to the corresponding terminals.



4. Reinstall all removed parts.

NOTICE Always connect RED (+) cable first then BLACK (-) cable. Cover all wire terminals with their protective caps.

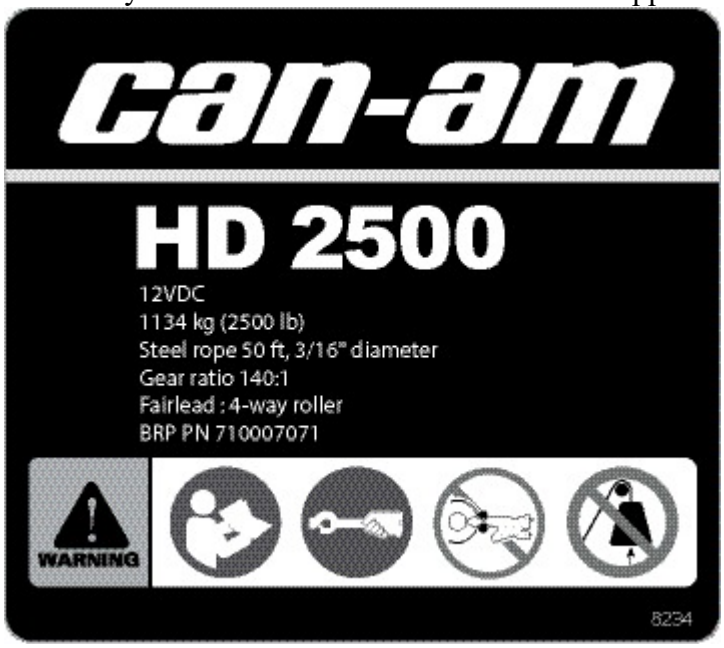
care and maintenance

NOTICE To avoid risk of damaging of the winch cable, do not apply pressure on the cover of the storage compartment when closing.

WARNING

Do not use the winch when fix on the side on the vehicle. Damage may occur.

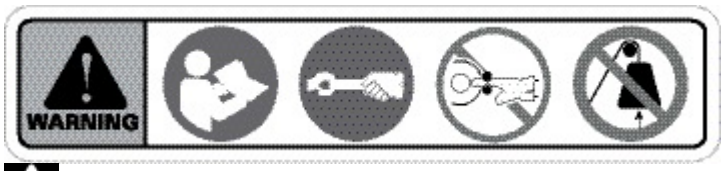
CAUTION: Always secure the hook with a strap and a rubber band when the winch is not in use, and always store the winch in the welded side support when not in use.



Model HD 2500

WARNING

- Locate and read the operator's guide. Improper use can result in SEVERE INJURY or DEATH. Follow all instructions and warnings.
- Never put your fingers into the hook.
- Always use the hand strap to manipulate the hook and rope.
- Avoid putting your hand between hook and roller fairlead. You can crush your fingers.
- Never use the winch to lift objects or people.



WARNING

- Do not remove the hand strap from the hook.
- Always use the hand strap to manipulate the hook and rope.