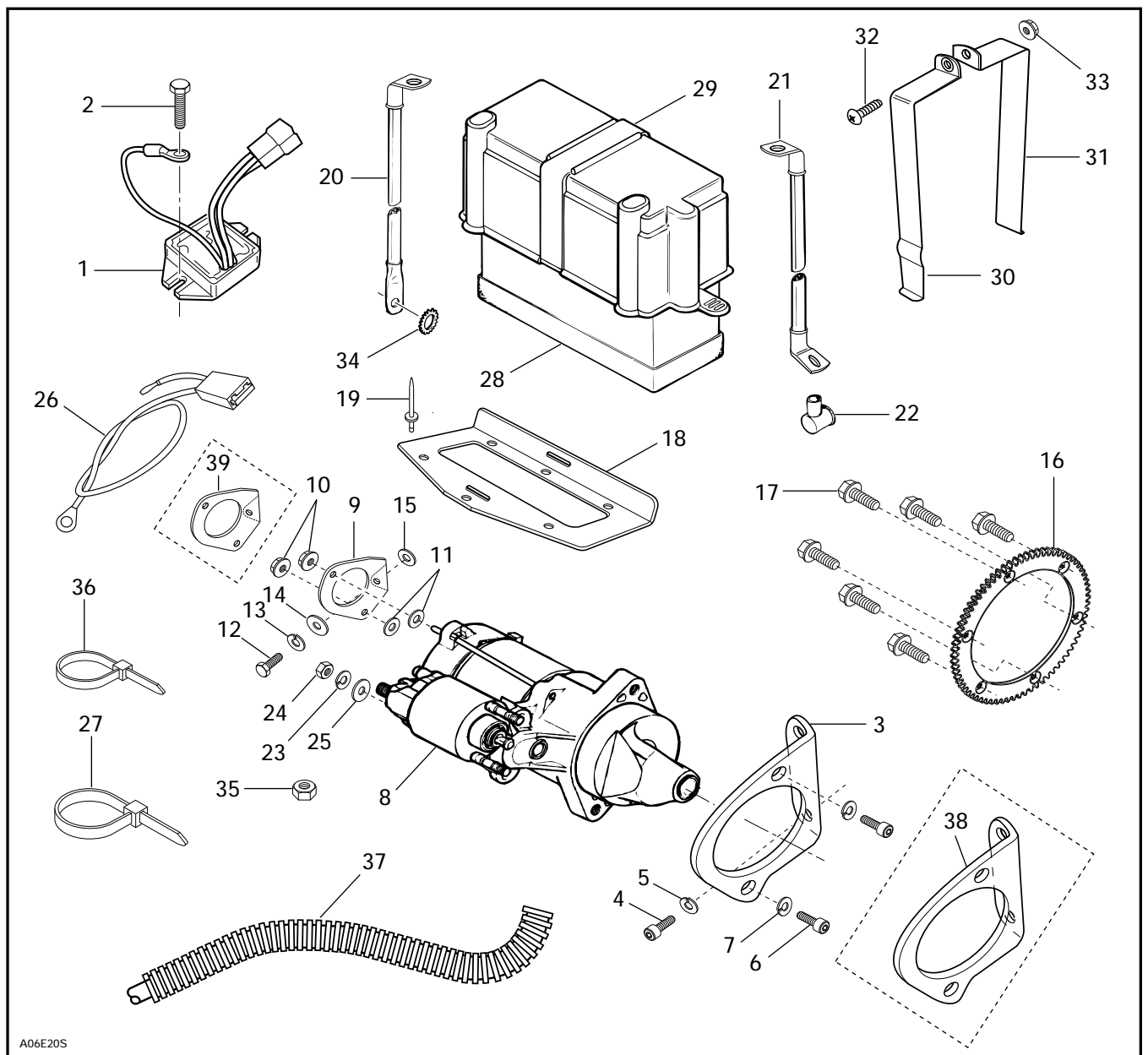




◆ **WARNING :** For safety reasons, this kit must be installed by an authorized Bombardier snowmobile dealer. Should removal of a locking device be required when undergoing disassembly/assembly, always replace with a new one. This instruction sheet should be given to the purchaser. This kit is designed for specific applicable models only. It is not recommended for vehicles other than those for which it was sold.

○ **NOTE :** Installation time is approximately 4 hours.

PARTS TO BE INSTALLED



A06E20S

1. Regulator/Rectifier
2. Self-Tapping Bolt M6 (2)
3. Starter Support PTO (Formula III)
4. Socket Screw M8 x 20 (2)
5. Lock Washer M8 (2)
6. Socket Screw M8 x 25 (2)
7. Lock Washer M8 (2)
8. Starter
9. Starter Support MAG (Formula III)
10. Nut M5 (2)
11. Washer 7/32 (2)
12. Bolt M8 x 16
13. Lock Washer M8
14. Washer M8
15. Hardened Washer (2)
16. Ring Gear
17. Self-Tapping Bolt M6 (6)
18. Battery Seat
19. Rivet (6)
20. Negative Ground Wire
21. Positive Battery Wire
22. Protection Cap
23. Lock Washer M8
24. Nut M8
25. Washer M8
26. Fuse Holder
27. Locking Tie (7)
28. Battery
29. Battery Cover
30. Battery Strap
31. Battery Strap
32. Machine Screw M5
33. Nut M5
34. Star Washer 1/4
35. Nut M10 (4)
36. Locking Tie
37. Protector
38. Starter Support PTO (Mach Z)
39. Starter Support MAG (Mach Z)

INSTRUCTIONS

Battery Preparation

Prior to electric starter kit installation, battery must be charged. Refer to Shop Manual for procedure.

◆ **WARNING** : Never charge or boost battery while connected or installed on vehicle.

Vehicle Preparation

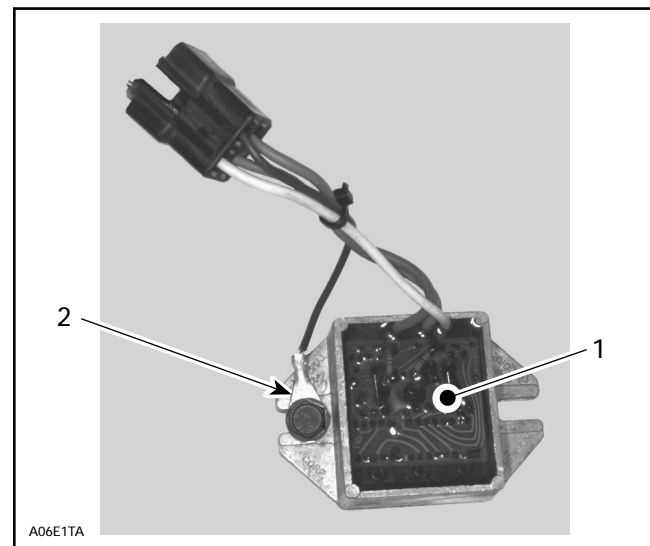
Close fuel shut off valve.

Remove tuned pipes, muffler, belt guard, drive belt, air intake silencer.

Loosen drive pulley retaining screw for later removal.

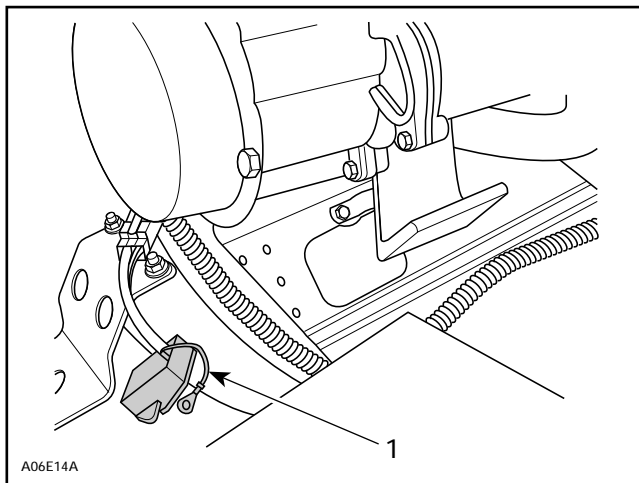
Regulator/Rectifier

1. Unscrew engine support nuts from bounding rubber mounts. Lift engine enough so a hand can pass under to reach the rectifier. Support the engine using a wood block.
2. Replace original regulator/rectifier, located along RH side member of frame. Discard fasteners. Secure the regulator/rectifier **no. 1** on both sides with a self-tapping bolt M6 **no. 2** and the ground wire from regulator/rectifier.



1. Regulator/Rectifier
2. Connect ground wire here

3. Apply silicone dielectric grease (P/N 413 7017 00) in connectors of regulator/rectifier and vehicle harness then connect them. Secure connectors with a locking tie **no. 27**.



A. Regulator/Rectifier

NOTE : Ensure wire colors are matched as follows :

REGULATOR/ RECTIFIER WIRES	VEHICLE WIRES
RED	RED/BLUE
YELLOW	YELLOW
GREEN	YELLOW/BLACK
BLACK	BLACK

Ring Gear

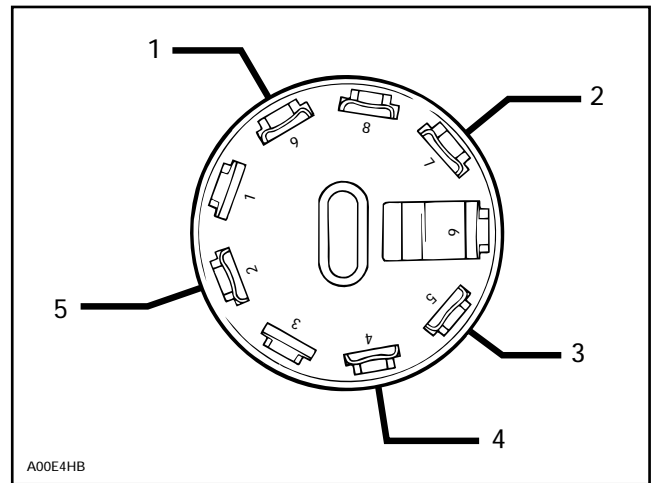
1. Remove drive pulley. Refer to appropriate *Shop Manual* to perform drive pulley disassembly/assembly procedures and to proceed with pulley alignment.
2. Secure ring gear **no. 16** on inner half using self-tapping M6 x 12 bolts **no. 17**. Apply Loctite 271 (red) on bolt threads.

CAUTION : Loctite 271 (red) must be applied to safely assemble ring gear.

3. Torque bolts in a criss-cross sequence to 11 N•m (97 lbf•in).
4. Do not reinstall drive pulley at this time.

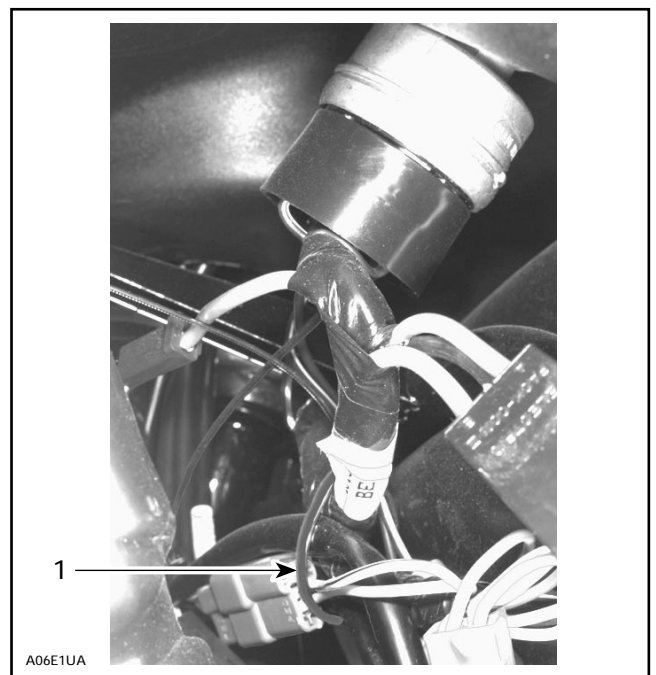
Ignition Switch

1. Cut locking tie and separate connector from ignition switch. Slide the shortest wire of fuse holder **no. 26** inside connector boot. Connect the terminal in position **no. 7**.



1. RED/GREEN wire to solenoid
2. RED wire with fuse to battery
3. BLACK
4. RED/BLUE
5. BLACK/YELLOW

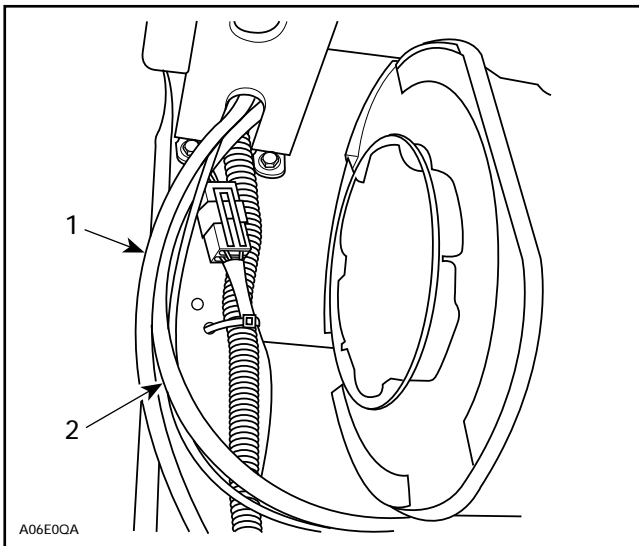
2. Replug connector to switch and secure wires with locking ties.



1. Locking tie

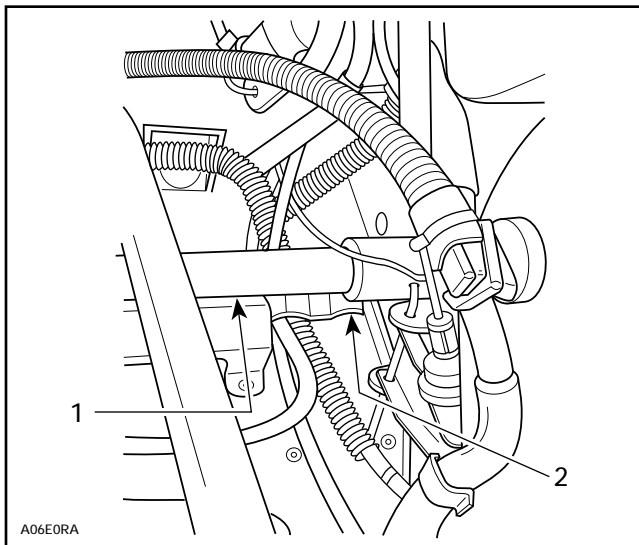
Wire/Cable Connections and Routing

1. Ensure that 1 terminal of each battery cable **no. 20** and **no. 21** is bent to 90°. Bend as necessary.
2. Starting from battery location, route battery cables toward starter location along vehicle harness. The bent terminals will be connected to the battery.



1. RED cable to battery
2. BLACK cable to battery

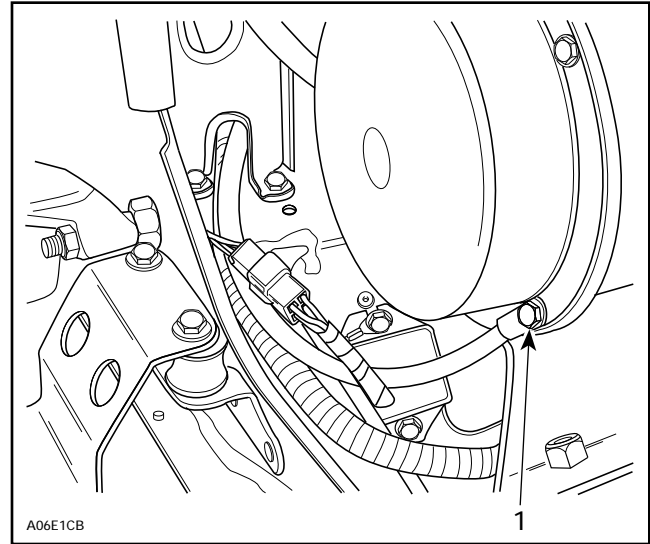
NOTE : Route cables through free bracket underneath countershaft.



1. Countershaft
2. Bracket

3. Lower engine then secure it.

4. Install black battery cable no. 20 to rewind starter. Secure with rewind starter screw and the star washer no. 34. Refer to illustration for proper assembly.



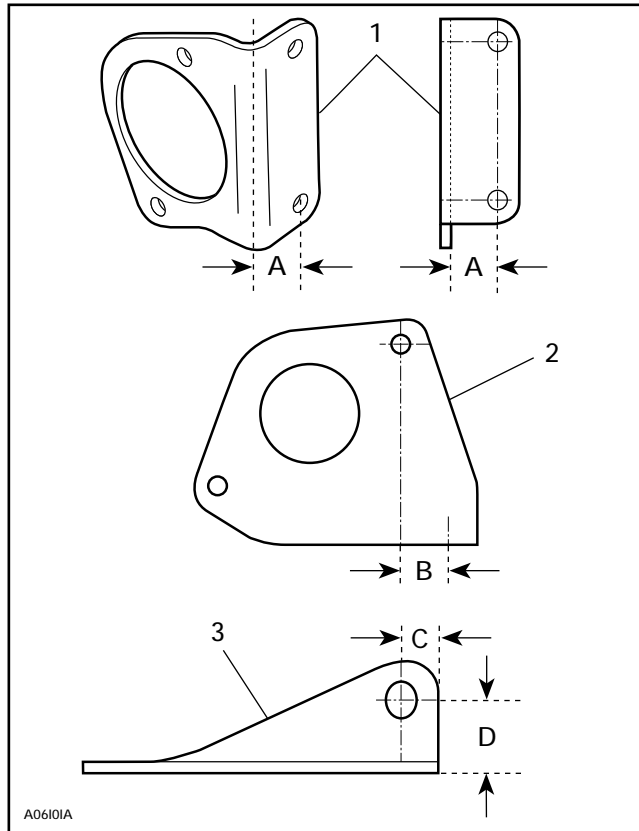
TYPICAL

Electric Starter

CAUTION : Apply Loctite 271 (red) on all fastener threads of starter supports.

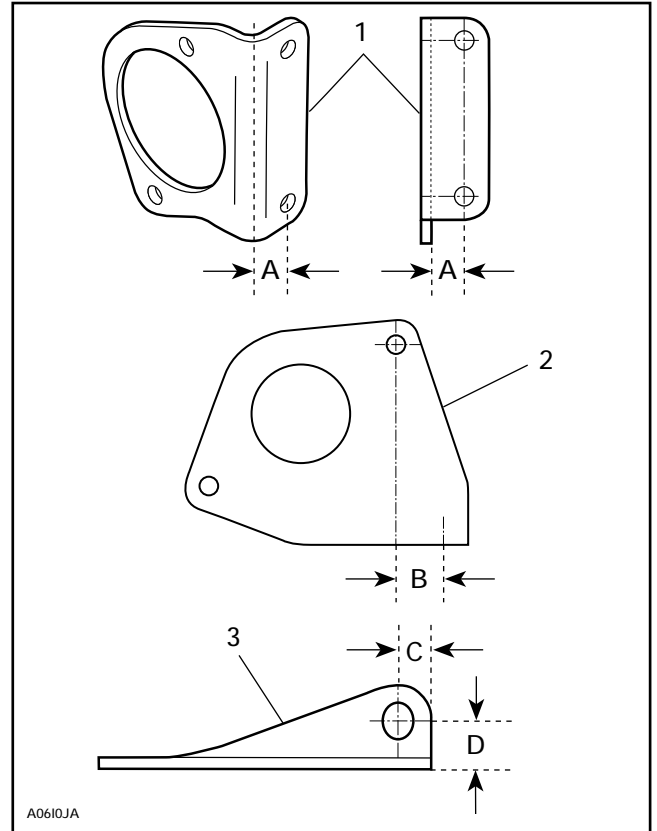
1. Install starter support PTO side no. 3 (for Mach Z no. 38) to engine using Allen screws M8 x 20 no. 4 and lock washers no. 5. Tighten firmly. Refer to following illustrations for proper starter support applications.

Mach Z

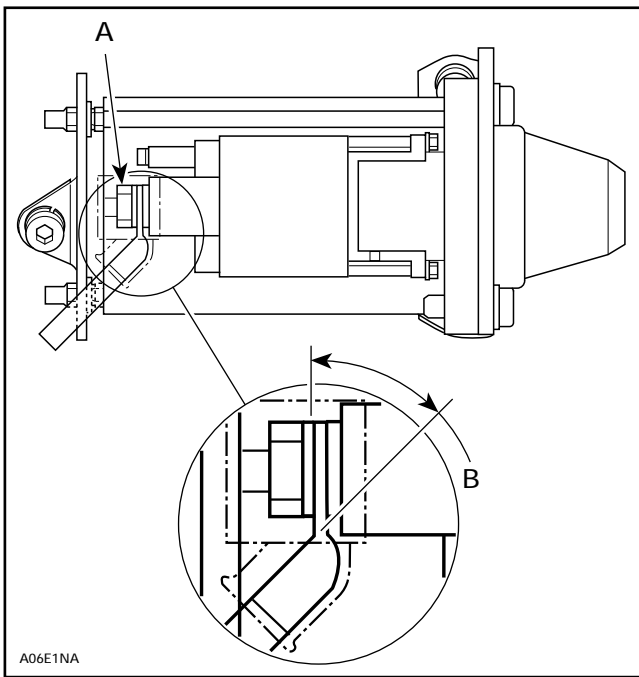


1. Starter support PTO side
 2. Starter support MAG side (front view)
 3. Starter support MAG side (side view)
- A. 23.6 mm (29/32 in)
B. 16.7 mm (5/8 in)
C. 10 mm (3/8 in)
D. 19.6 mm (3/4 in)

Formula III

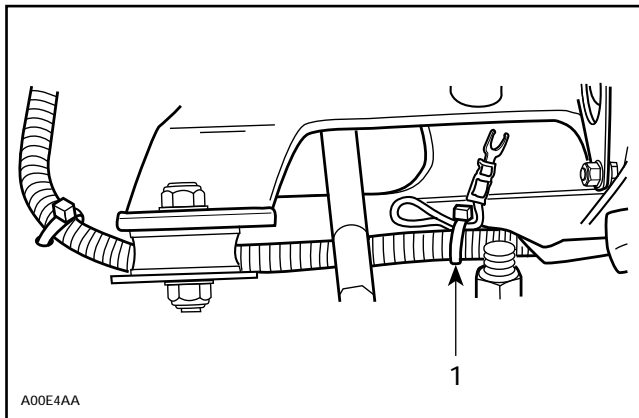


1. Starter support PTO side
 2. Starter support MAG side (front view)
 3. Starter support MAG side (side view)
- A. 17.8 mm (11/16 in)
B. 17.7 mm (11/16 in)
C. 9 mm (11/32 in)
D. 13.8 mm (17/32 in)
2. Install electric starter **no. 8** on support, bottom bolts first and secure it using M8 x 25 socket screws **no. 6** and lock washers M8 **no. 7**.
 3. Install flat washers M6 **no. 11** over nuts of starter through bolts.
 4. Install starter support MAG side **no. 9** (For Mach Z **no. 39**) to starter and secure with M5 nuts **no. 10**.
 5. If necessary, install hardened washer(s) **no. 15** to fill the gap between the support and the engine. Secure the support to engine with M8 x 16 bolt **no. 12**, flat washer **no. 14** and lock washer **no. 13**.
 6. Slide protector **no. 37** and protection cap **no. 22** on the positive RED battery wire **no. 21**. Install RED wire, flat washer M8 **no. 25**, lock washer M8 **no. 23** and nut M8 **no. 24** to the starter, turn cable end as much as possible towards the engine. Tighten nut to 13 N•m (10 lbf•ft). Bend cable end at 45° and cover the terminal with protection cap **no. 22**.



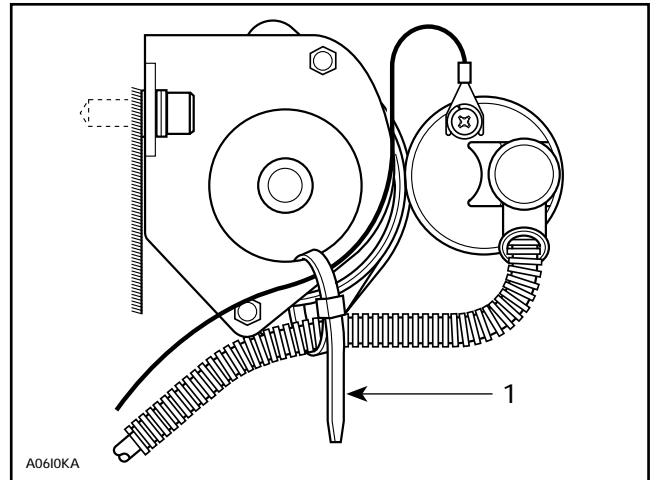
A. 13 N•m (10 lbf•ft)
 B. 45°

7. Cut the locking tie as illustrated. Connect RED/GREEN wire to the small post on solenoid. Position terminal under lock washer.



1. Locking tie

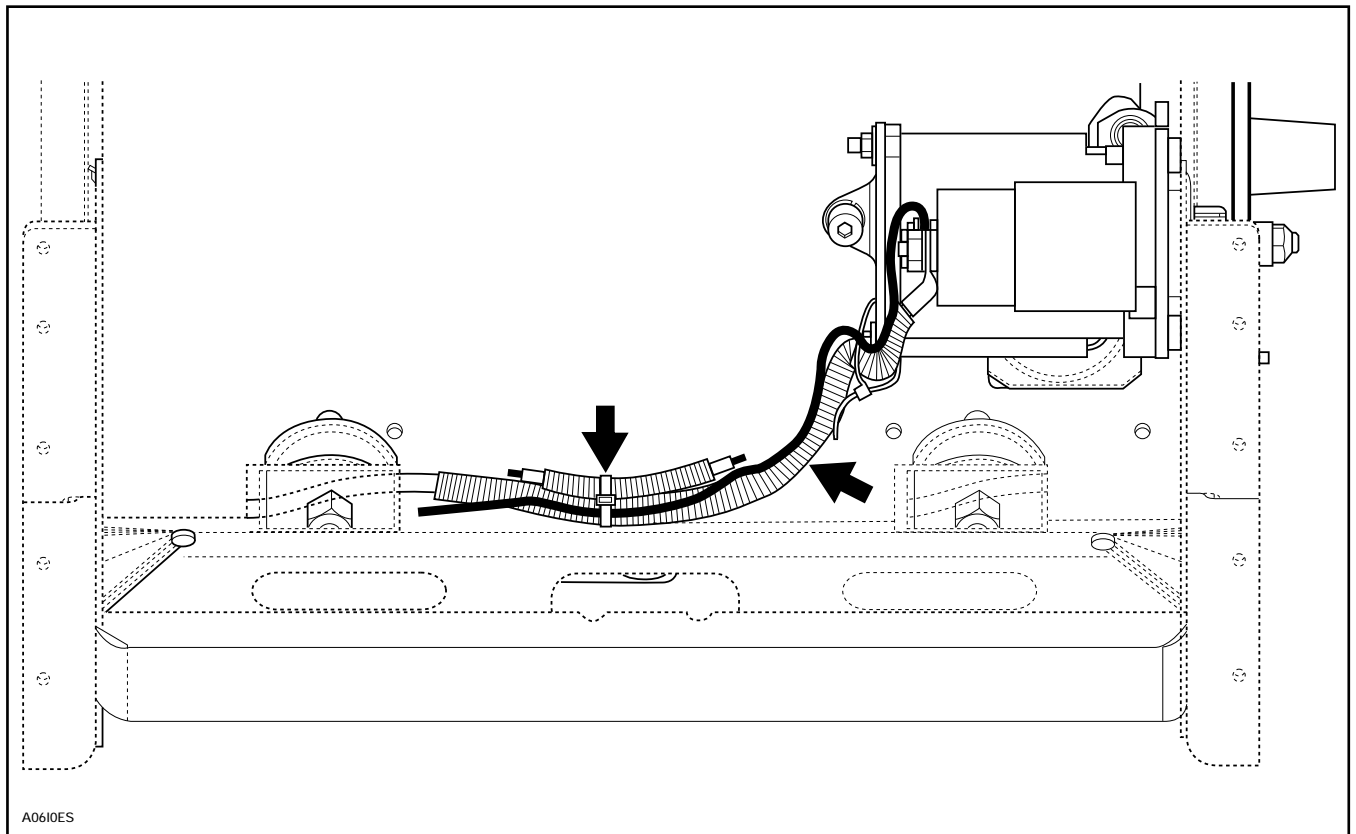
8. Using locking tie no. 27, tie down positive cable loosely to starter rear bracket as illustrated.



1. Tie loosely

9. Pull out excess amount of cable from underneath engine.

10. Using long locking tie no. 36 secure harnesses to torsion bar under central steering tie-rod as illustrated on the following page.



A0610ES

TOP VIEW

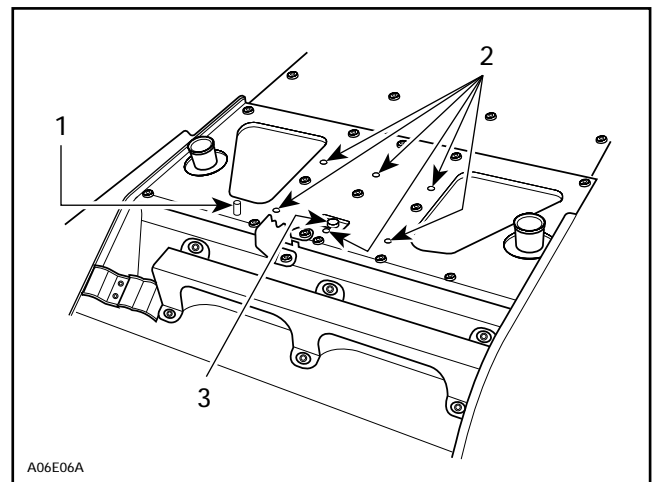
11. Secure all cables/wires with locking ties no. 27 supplied.

◆ **WARNING** : Ensure all terminals are properly crimped on wires/cables and that all connector housings are properly fastened. Keep wires away from any rotating, moving, heating, vibrating and sharp edge. Use proper fastening devices as required.

Battery and Rack

▼ **CAUTION** : Cover carburetor intakes with a clean rag during the following drilling operation.

1. Drill 6 holes in chassis with a 5.2 mm (13/64 in) drill bit as shown. Use existing holes in chassis as a template. Push down the plastic cap.
2. Secure battery rack with rivets no. 19.



A06E06A

1. Hollow rivet
2. Drill 5.2 mm (13/64 in) holes
3. Push down plastic cap

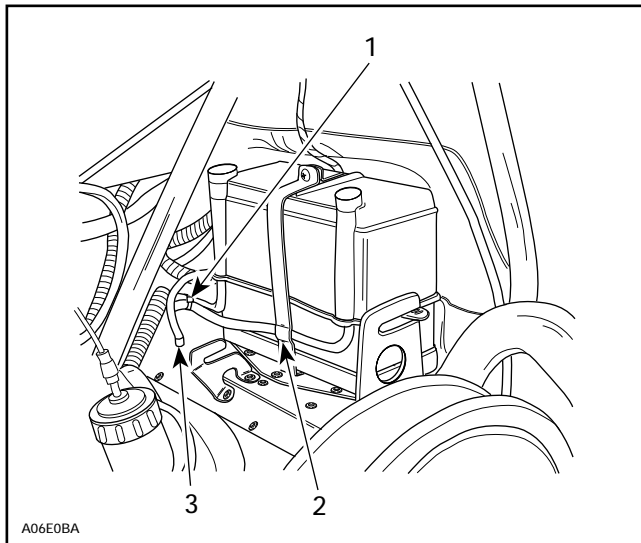
3. Install battery no. 28 in rack. Connect vent tube to battery and other end to hollow rivet of chassis. Cut vent tube to proper length as necessary. Ensure that the tube used is not kinked or bent.

◆ **WARNING** : Vent tube must be free and open. A kinked or bent tube will restrict battery ventilation and allow gas accumulation that could cause an explosion.

4. Connect positive red cable and RED wire with fuse (from ignition switch) to battery THEN to BLACK ground cable. Secure cables on top of the battery posts.

◆ **WARNING : BLACK negative battery cable must always be connected LAST.**

5. Install battery cover no. 29 and secure with straps, no. 30 and no. 31, M5 x 20 screw no. 32 and nut no. 33. Position red cable and RED wire in indentation on strap.
6. Fasten battery cables using a locking tie no. 27 as shown.



1. Locking tie on battery cables here
2. RED cable secured by strap
3. Vent tube on hollow rivet

Finalizing Assembly

Refer to the Ski-Doo Shop Manual for proper reinstallation procedure.

1. Reinstall drive pulley.
2. Check pulley alignment.

◆ **WARNING : Drive pulley alignment must always be checked whenever pulleys have been removed, replaced or disassembled.**

3. Reinstall remaining removed parts.

○ **NOTE :** Apply Dow Corning sealer no. 736 RTV on exhaust manifold ball joint.

4. Test electrical starting and ignition cut-out systems as per normal starting procedure for electric starter models.

861 5029 00

1.	515 1571 00	Regulator / Rectifier	Régulateur / redresseur
2.	732 6000 05	Self-Tapping Bolt M6 (2)	Boulon autotaraudeur M6 (2)
3.	512 0538 00	Starter Support PTO (Formula III)	Support de démarreur (côté PDM) (Formula III)
4.	222 9820 65	Socket Screw M8 x 20 (2)	Vis à tête creuse M8 x 20 (2)
5.	420 9457 52	Lock Washer M8 (2)	Rondelle-frein M8 (2)
6.	222 9825 65	Socket Screw M8 x 25 (2)	Vis à tête creuse M8 x 25 mm (2)
7.	224 7811 40	Lock Washer M8 (2)	Rondelle-frein M8 (2)
8.	410 2092 00	Starter	Démarreur
9.	512 0537 00	Starter Support MAG (Formula III)	Support de démarreur (côté MAG) (Formula III)
10.	228 7510 45	Nut M5 (2)	Écrou M5 (2)
11.	391 3017 00	Washer 7/32 (2)	Rondelle 7/32 (2)
12.	222 0816 65	Bolt M8 x 16	Boulon M8 x 16
13.	420 9457 52	Lock Washer M8	Rondelle-frein M8
14.	224 0811 71	Washer M8	Rondelle M8
15.	503 0079 00	Hardened Washer (2)	Rondelle trempée (2)
16.	414 8075 00	Ring Gear	Couronne de lancement
17.	732 6011 20	Self-Tapping Bolt M6 (6)	Boulon autotaraudeur M6 (6)
18.	517 2475 00	Battery Seat	Base de batterie
19.	390 4023 00	Rivet (6)	Rivet (6)
20.	515 1575 00	Battery Ground Cable (BLACK)	Câble de masse de la batterie (NOIR)
21.	515 1613 00	Battery Positive Cable (RED)	Câble positif de la batterie (ROUGE)
22.	570 1510 00	Protection Cap	Capuchon de protection
23.	420 9457 52	Lock Washer M8	Rondelle-frein M8
24.	228 0810 45	Nut M8	Écrou M8
25.	224 0811 71	Washer M8	Rondelle M8
26.	515 1573 00	Fuse Holder	Porte-fusible
27.	414 1152 00	Locking Tie (7)	Attache (7)
28.	410 3011 00	Battery	Batterie
29.	570 0220 00	Battery Cover	Couvercle de batterie
30.	517 2476 00	Battery Strap (Front)	Bande de batterie (avant)
31.	517 2277 00	Battery Strap (Rear)	Bande de batterie (arrière)
32.	222 8520 65	Machine Screw M5	Vis à métaux M5
33.	228 7510 45	Nut M5	Écrou M5
34.	394 0019 00	Star Washer 1/4	Rondelle étoile 1/4
35.	228 5010 45	Nut M10 (4)	Écrou M10 (4)

861 5029 00

36.	748 0010 01	Locking tie	Attache
37.	414 6124 00	Protector	Gaine de protection
38.	512 0521 00	Starter Support PTO (Mach Z)	Support de démarreur (côté PDM) (Mach Z)
39.	512 0520 00	Starter Support MAG (Mach Z)	Support de démarreur (côté MAG) (Mach Z)