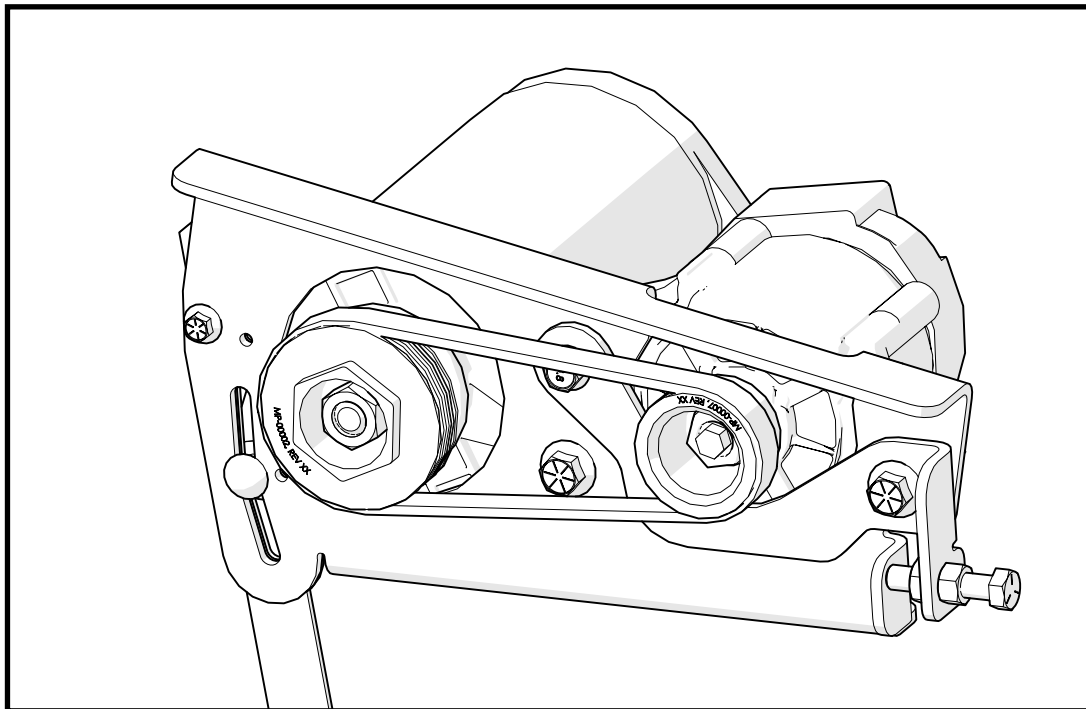




A/C Alternator Kit
p/n: 1ACCA14DRK
(fits Club Car Carryall 4x2,
Carryall 300, 500, 550, and 700)
(all w/ Subaru engines, 2014-2018)

Must be installed with Curtis Cab: 1CCCA-1 or 47587415001
 Must be installed with Curtis Air Conditioner: 1ACUNIT-G2
 Must be installed with Curtis A/C Roof Kit: 1ACCA14RFK



Approximate Installation Time *
Experienced Dealer Technician – 1 Hour
Average Dealer Technician – 1.5 Hours
Do-It-Yourself – 2 Hours

(*Not including cab & other accessories)

Approximate Product Specifications
Weight: 39 lbs.

The contents of this envelope are the property of the owner. Leave with the owner when installation is complete.

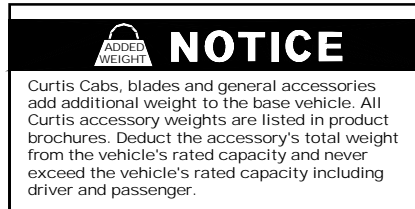
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WARNINGS, TIPS, & REQUIRED TOOLS

Curtis accessories feature an assembly of parts designed for your vehicle which require adjustment and alignment of components to accommodate vehicle variations. For accurate installation, proper operation, and years of satisfaction, please read and understand the installation and owner's manual fully, prior to installing this accessory.

From all of us at Curtis, we thank you for choosing our product.



California Health and Safety Proposition 65 Warning: This product may contain chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

GENERAL INFORMATION BEFORE YOU START

HELPFUL HINTS:

- Refer to parts diagram found in the service parts section of this manual to help identify parts during the assembly process.
- To assist with the installation, leave all fasteners loose for later adjustment unless otherwise specified.
- Read and understand all instructions before beginning.
- Use proper personal protective equipment during all phases of installation.
- ALWAYS shut off engine before leaving the operator's seat to perform any portion of the procedures listed in this manual.
- ALWAYS disconnect the ground cable from the battery when working with any electronics components.
- Follow Lock-out / Tag-out procedures to maintain a safe work environment.

TOOLS REQUIRED

- Set of metric & standard sockets (1/4" or 3/8" drive)
- Set of metric & standard open-end wrenches
- Set of metric Allen wrenches
- Ratchet and extensions
- 7/8", 1/2" drive socket and ratchet
- #2 Phillips screw driver
- Flathead screw driver
- Torque wrench

KIT INSTALLATION

STEP 1: (ALTERNATOR INSTALLATION)

- 1.1 Install the A/C roof, A/C unit, and any cab accessories onto the cab per the Installation Manual included with the roof kit.

NOTE: The power harness from this kit must be installed as part of the roof installation due to the two-piece design of the Carryall cab roof and the routing of the power harness.

- 1.2 Ensure that both wires are disconnected from the battery, negative and positive.

Tools

9/16" wrench or socket

- 1.3 Loosen the Starter Generator and disengage its V-belt. Figure 1.3.

Tools

1/2" and 9/16" sockets

1/2" and 9/16" wrenches

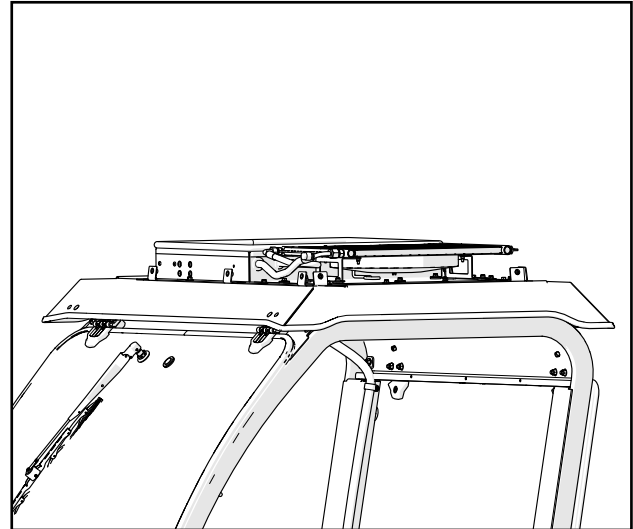


Fig. 1.1 (Roof and A/C Unit Assembly)

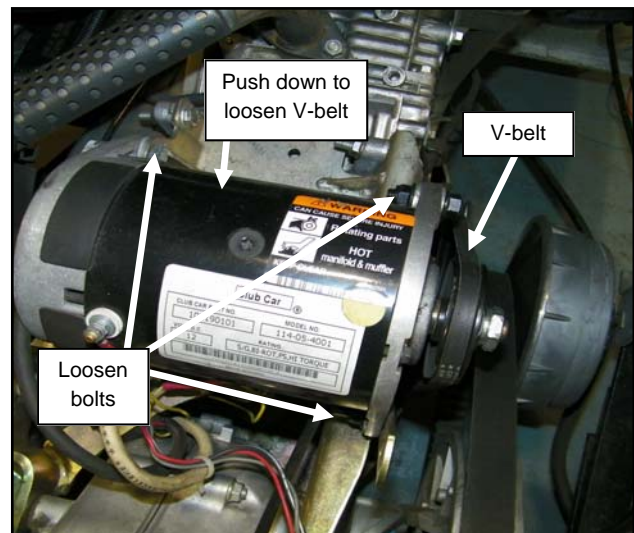


Fig. 1.3 (Loosen Starter Generator)

- 1.4 Remove the nut, lock washer, and pulley from the starter generator drive shaft. Take care to avoid dislodging the shaft key from the starter generator. Replace the OEM pulley with the pulley provided with this kit, aligned to the shaft key. Re-install the lock washer and nut. Figure 1.4.

NOTE: Using an impact gun on this pulley is not recommended, as it may damage the pulley spacer. The spacer allows the pulley to float along the starter generator shaft and maintain drive belt alignment.

Hardware Used

Generator pulley

Qty

1

Tools

1" wrench (for OEM pulley)

1-5/8" wrench or adjustable wrench (for new pulley)

7/8" socket

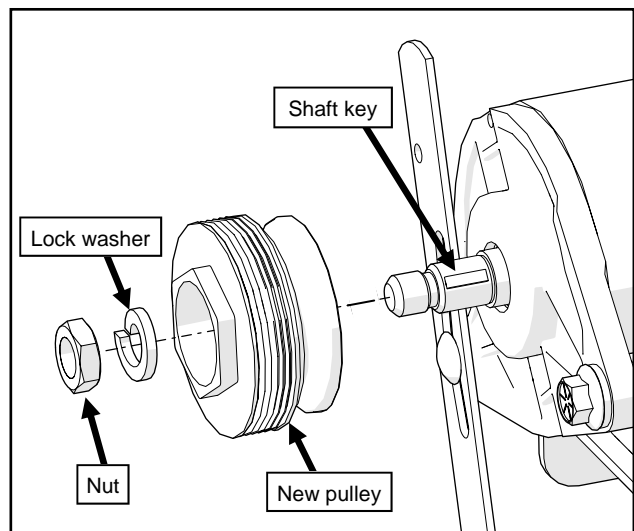


Fig. 1.4 (Install New Pulley)

KIT INSTALLATION

- 1.5** Completely remove the bolts on the pulley side of the generator, leaving only one of the large bolts in place for the moment. Figure 1.5.

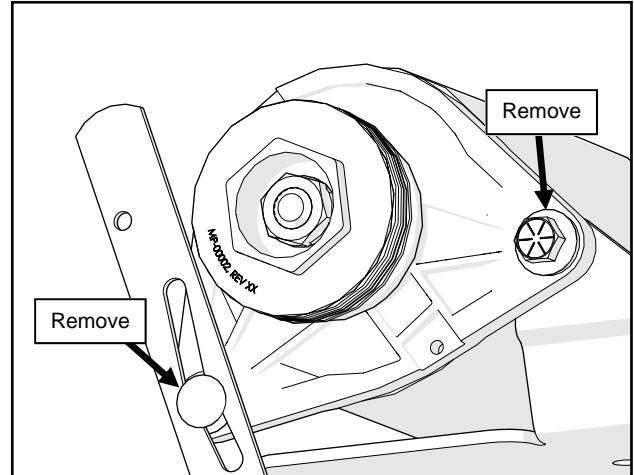


Fig. 1.5 (Remove Starter Generator Hardware)

- 1.6** Install the bracket for the auxiliary alternator in the holes that were cleared in the previous step. Longer fasteners, provided with this kit, will replace those removed in the previous step. Figure 1.6.

Do not fully tighten fasteners until the next step.

Hardware Used

	Qty
Alternator Bracket	1
3/8-16, 1.5" flanged hex screw	1
5/16-18, 1.25" carriage bolt	1
1/4-20, 3/4" flanged hex screw	1
3/8-16 flanged hex nut	1
5/16-18 flanged hex nut	1
1/4-20 flanged hex nut	1
Alternator shim	1

Tools

3/8" & 9/16" wrenches
7/16", 1/2" & 9/16" sockets

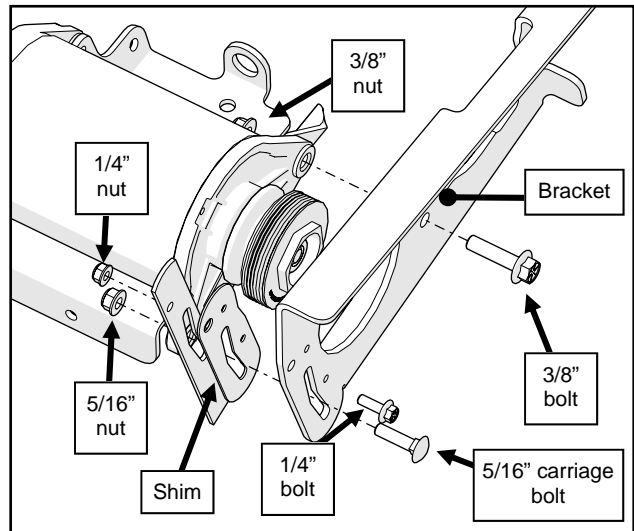


Fig. 1.6 (Alternator Bracket)

- 1.7** Re-install the OEM V-belt onto the new starter generator pulley. Tension the V-belt, and tighten the screws that secure the starter generator. Figure 1.7.

Tools

3/8" & 9/16" wrenches
7/16", 1/2" & 9/16" sockets

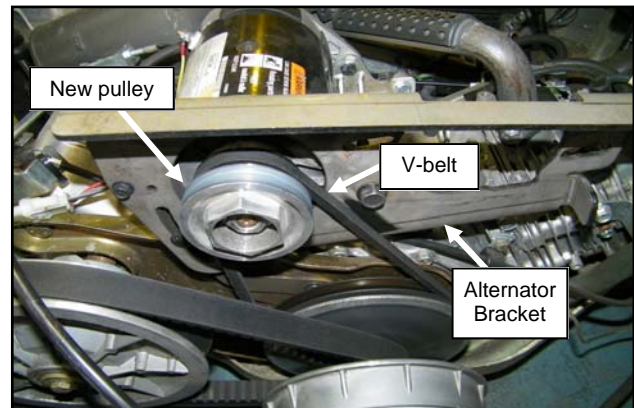


Fig. 1.7 (Install Starter Generator Belt)

KIT INSTALLATION

- 1.8** Install the alternator to the alternator bracket. Do not fully tighten the alternator bolts yet. The bolts must be snug, but loose enough to adjust the alternator along its bracket. Figure 1.8.

Install the alternator belt onto the new starter generator pulley and the alternator pulley. Apply tension to the belt with the tensioning bolt, then tighten the inner alternator bolt and the nut on the tensioning bolt. Leave the outer alternator bolt loose, ground wires will be connected here in later steps.

Hardware Used

Hardware Used	Qty
Alternator Assembly	1
Alternator Spacer Tube	1
Alternator Adjustment Bracket	1
3/8-16, 2" flanged hex bolt	1
3/8-16, 1.75" hex bolt	1
3/8-16 flanged hex nut	1
3/8-16 hex nut (non locking)	1
M8x1.25, 60mm hex head cap screw	1
V-belt, 6 ribs	1

Tools

13mm wrench or socket
9/16" wrench and socket

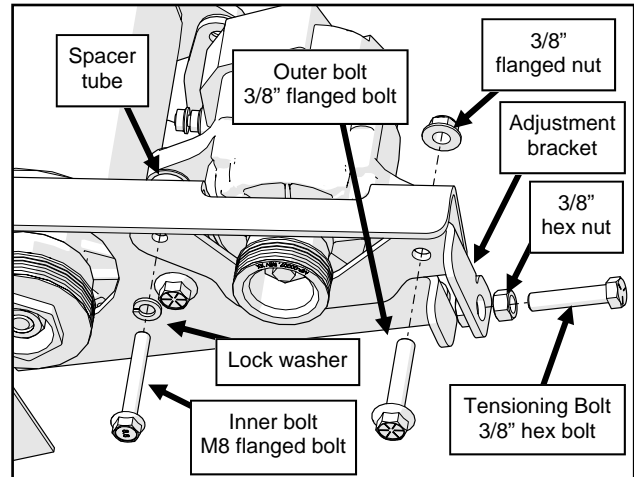


Fig. 1.8 (Install Alternator)

KIT INSTALLATION

STEP 2: (ALTERNATOR WIRING)

- 2.1** Locate the alternator ground wire (9SV-WH-00068). This is a single heavy gauge black wire with two ring terminals.

NOTE: The Power harness (9SV-WH-00065) should already be installed and secured to the cab as part of the roof installation.

Remove the nut from the outer bolt of the alternator that was installed during Step 1.8. Connect the heavy gauge black wire from the power harness and one end of the ground wire onto this bolt and secure with the nut. Figure 2.1.

Check tension on the alternator belt, re-tension if needed and tighten the alternator bolts.

- 2.2** Route the harnesses under the plastic shroud behind the vehicle seat and toward the battery. Attach the harnesses to the center of the plastic shroud behind the seat with a 1-1/4" P-clamp, 1/4-20 bolt and nut. Figure 2.2.

Hardware Used

1-1/4" P-Clamp

Qty

1

Tools

3/8" wrench or socket

7/16" wrench or socket

- 2.3** Remove the cover from the vehicle solenoid, located next to the battery. Connect the purple wire to the vehicle solenoid. To help identify this wire, it has a 5-amp fuse near the ring terminal, and has a section of black wire at the fuse holder. Figure 2.3 (shown with cover off).

The ring terminal must be attached to the large lug on the starter side of the solenoid (not the battery side). *If this ring terminal is on the wrong side of the solenoid, the controller will not turn off with the engine.*

Install the cover back over the vehicle solenoid, ensuring no wires are pinched by the cover.

Tools

5/16" wrench or socket

13mm wrench or socket

- 2.4** Route the white plug of the power supply harness under the exhaust tube and connect into the receptacle of the alternator. Only the top terminal of the "T" on the plug is used. Figure 2.4.

- 2.5** Locate the heavy red wire of the power harness. This wire forks into two wires.

There is a short segment (approx. 11") of red wire, with a smaller ring lug, on one leg of the harness. Route this leg of the red wire under the exhaust tube and connect to the post of the alternator. Cover the connection with the wire harness's rubber boot. Figure 2.4.

Tools

10mm wrench



Fig. 2.1 (Ground Terminals on Alternator)

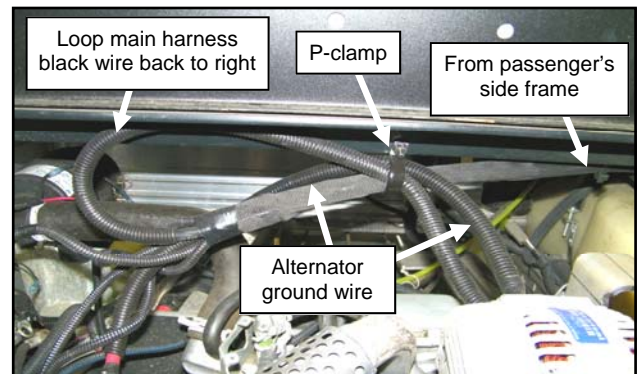


Fig. 2.2 (Harness Routing)

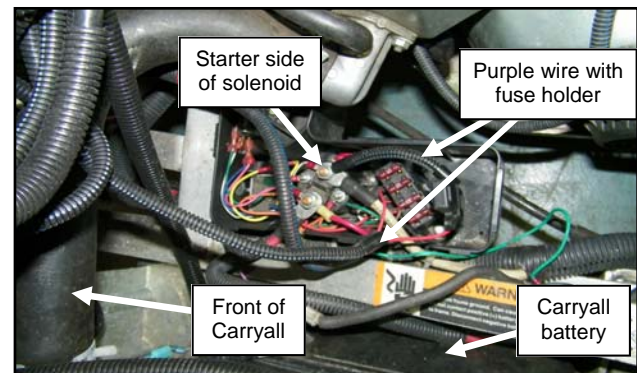


Fig. 2.3 (Purple Wire on Solenoid)



Fig. 2.4 (Alternator Wiring)

KIT INSTALLATION

- 2.6** Locate the RPM signal wire harness (9SV-WH-00081). The harness is a 2-foot long wire with a male bullet and female push-on terminals.

Locate the connector for the RPM signal, underneath the rear of the engine. This is a double female bullet connector covered by a clear rubber boot. Figure 2.6.

Install the male bullet terminal from the RPM signal wire into the unused side of the connector. Route the wire up the left side of the engine and back toward the alternator wires.

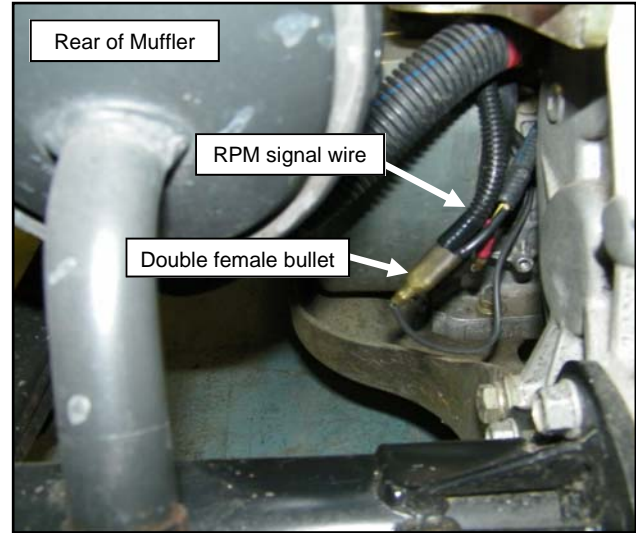


Fig. 2.6 (Connect RPM Signal Harness to Engine Wires)

- 2.7** Connect the female push-on terminal from the RPM signal wire harness to the male terminal on the brown wire from the power harness. Figure 2.7.

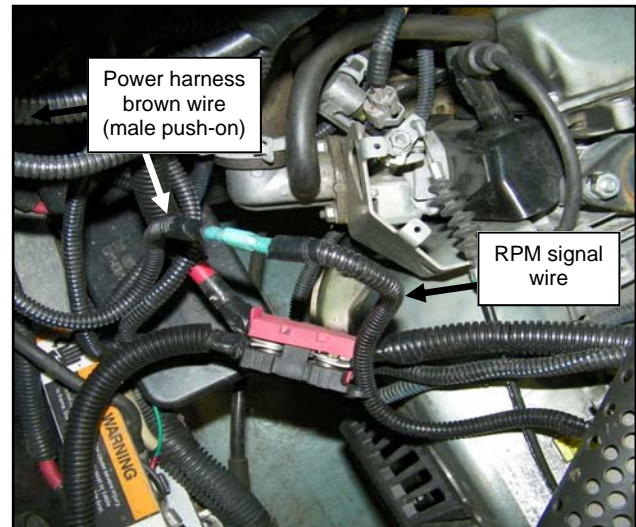


Fig. 2.7 (Connect RPM Signal Harness to Power)

- 2.8** Use wire ties to secure the wire harnesses away from moving parts and the vehicle exhaust, around the alternator wires and RPM signal wire along the left side of the engine and in front of the battery.

Hardware Used

Wire Ties

Qty

3

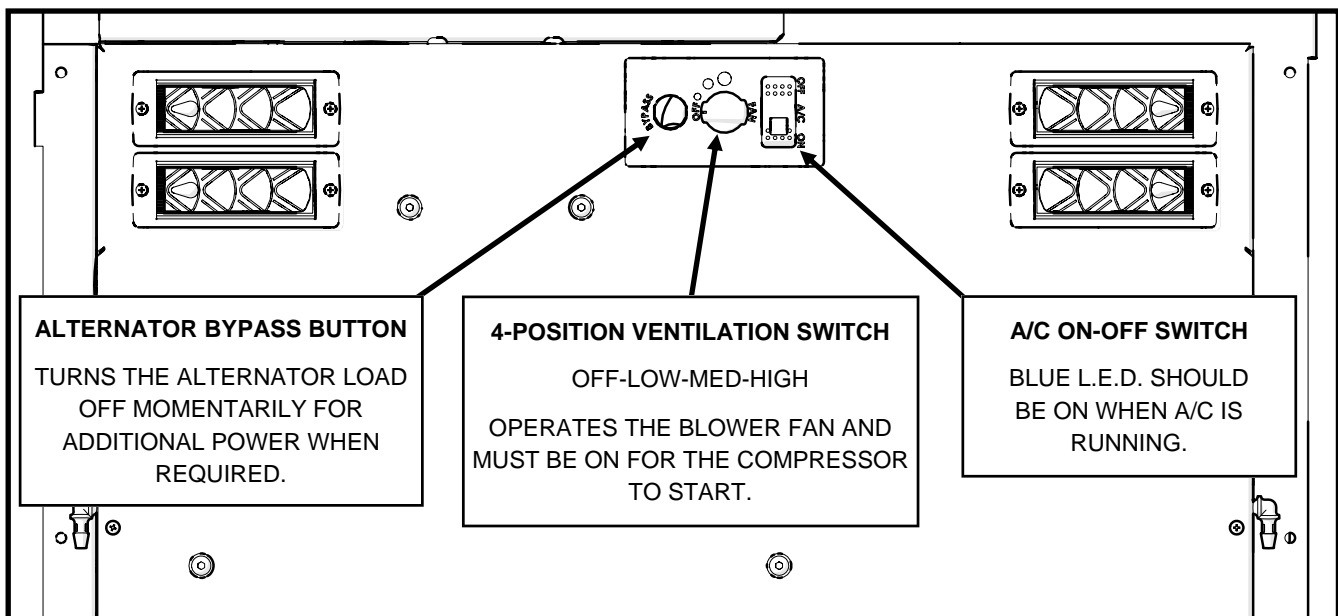


Fig. 2.8 (Wire Ties)

KIT INSTALLATION

STEP 3: (FINISHING TOUCHES)

- 3.1 Inspect all belts for tightness, adjust as necessary.
- 3.2 Inspect all fasteners, they should be fully tightened before starting the vehicle.
- 3.3 Inspect all wires to make sure they are sufficiently tied down and away from hot or moving parts.
- 3.4 Reconnect the positive battery terminal. Be sure to connect the ring terminal on the end of the heavy gauge red wire from step 2.5 to the positive terminal as well.
- 3.5 Reconnect the negative battery terminal. Be sure to connect the ring terminal on the end of the heavy gauge black wire installed in step 2.1 as well as the original vehicle wire.
- 3.6 Flip the switch under the front of the Carryall seat to "Maintenance". This will allow the engine to run in neutral but not in drive or reverse.
- 3.7 Place the seat back into the Carryall.
- 3.8 Start the vehicle in neutral, and turn on the air conditioner. Run the engine at full RPM (above 1600 RPM). Cool air should begin to flow after 30 to 60 seconds. Verify that the air conditioner is functioning. If it is not functioning, refer to the troubleshooting section in the A/C manual.
Turn off the vehicle and return the maintenance switch back to "Operate".
- 3.9 Continue with the roof kit installation at this time to install the cover to the air conditioner, detailed instructions and hardware are provided with the roof kit.

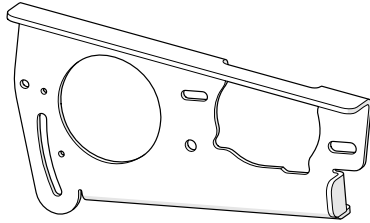


CARE AND MAINTENANCE

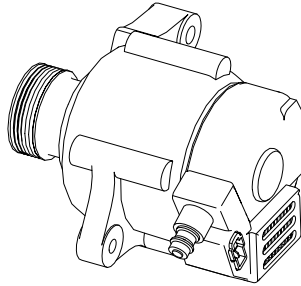
- Check and tighten hardware after 20 hours of operation. Periodically inspect and tighten hardware for the remainder of the unit's life.
- Wash the painted surfaces with commercial automotive cleaning products.

CLUB CAR CARRYALL 4X2 A/C ALTERNATOR KIT SERVICE PARTS

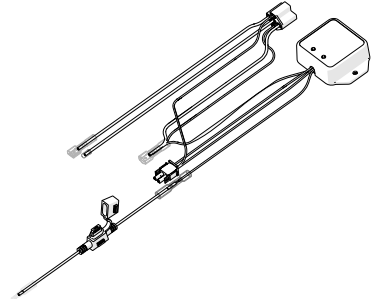
BRACKET, AUXILIARY ALTERNATOR
P/N: 8SV-SM-00842



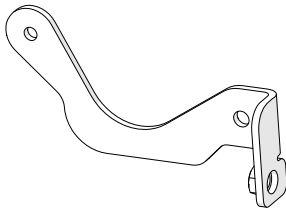
ALTERNATOR, PULLEY, AND SPACER
P/N: 8SV-114-00013



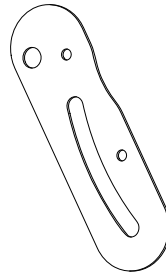
CONTROLLER
P/N: 8SV-114-00019



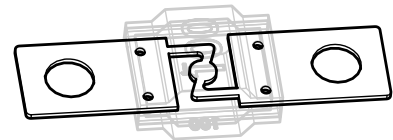
BRACKET, ALTERNATOR ADJUSTMENT
P/N: 8SV-WA-00201



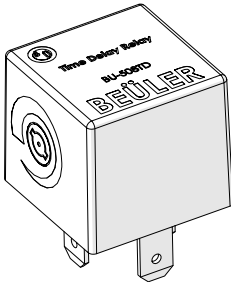
ALTERNATOR BRACKET SHIM
P/N: 8SV-SM-00844



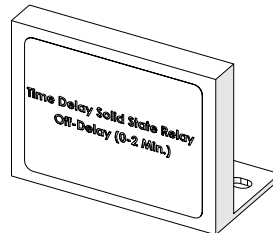
100 AMP FUSE
P/N: 9SV-85-00-0011



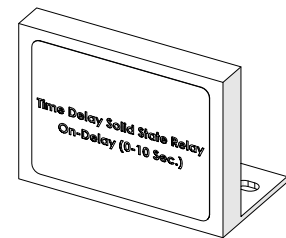
TIME DELAY OFF RELAY, 90 SEC
P/N: 8SV-114-00020



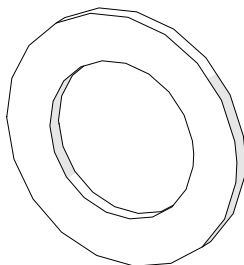
TIME DELAY OFF RELAY, 2 MIN
P/N: 8SV-114-00022



TIME DELAY ON RELAY, 5 SEC
P/N: 8SV-114-00023



ALTERNATOR PULLEY SHIM
P/N: 9SV-71-66-0127

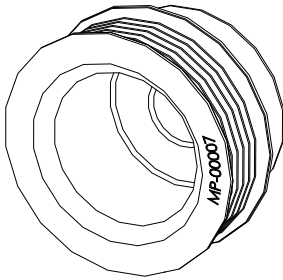


BELT
P/N: 9SV-9BLT-02

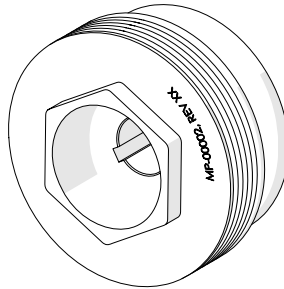


CLUB CAR CARRYALL 4X2 A/C ALTERNATOR KIT SERVICE PARTS

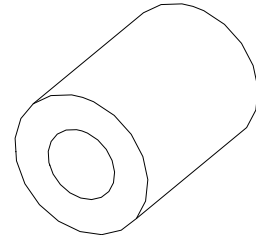
PULLEY, AUX ALTERNATOR
P/N: 9SV-MP-00007



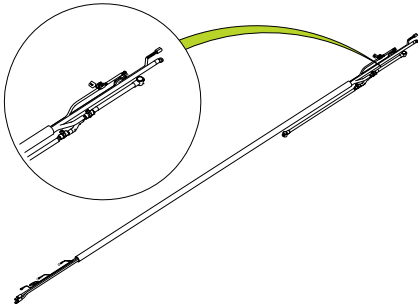
PULLEY, GENERATOR
P/N: 9SV-MP-00002



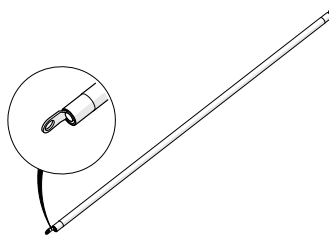
ALTERNATOR SPACER TUBE
P/N: 9SV-MP-00012



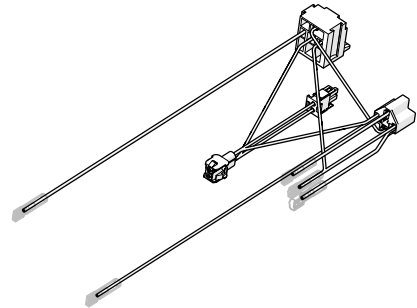
POWER SUPPLY HARNESS
P/N: 9SV-WH-00065



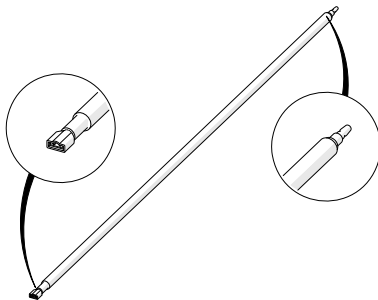
ALTERNATOR GROUND WIRE
P/N: 9SV-WH-00068



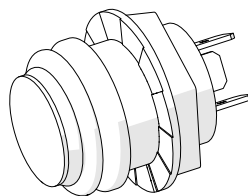
RELAY HARNESS
P/N: 9SV-WH-00074



RPM SIGNAL HARNESS
P/N: 9SV-WH-00081



PUSH BUTTON, 14V DC, 10A, SPST
P/N: 9SV-85-03-0033



ADDITIONAL SERVICE PARTS

PART NUMBER	DESCRIPTION
9SV-HWK-00077	HARDWARE KIT, A/C DRIVE KIT, CLUB CAR CARRYALL




BOLT TORQUE

BOLT TORQUE SPECIFICATIONS

GENERAL TORQUE SPECIFICATION TABLE

Use the following torques when special torques are not given. These values apply to fasteners as received from suppliers, dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads. Remember to always use grade five or better when replacing bolts.

IMPORTANT: On all PLATED GRADE 8 bolts, reduce torque 15% from listed bolt torque specification.

SAE Grade No.		2				5				8*			
Bolt head identification mark as per grade. NOTE: Manufacturing Marks Will Vary													
		TORQUE		TORQUE		TORQUE		TORQUE		TORQUE		TORQUE	
Bolt Size		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters	
Inches	Millimeters	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	6.35	5	6	7	8	9	11	12	15	12	15	16	20
5/16	7.94	10	12	14	16	17	20.5	23	28	24	29	33	39
3/8	9.53	20	23	27	31	35	42	48	57	45	54	61	73
7/16	11.11	30	35	41	47	54	64	73	87	70	84	95	114
1/2	12.70	45	52	61	70	80	96	109	130	110	132	149	179
9/16	14.29	65	75	88	102	110	132	149	179	160	192	217	260
5/8	15.88	95	105	129	142	150	180	203	244	220	264	298	358
3/4	19.05	150	185	203	251	270	324	366	439	380	456	515	618
7/8	22.23	160	200	217	271	400	480	542	651	600	720	814	976
1	25.40	250	300	339	406	580	696	787	944	900	1080	1220	1464
1-1/8	25.58	-	-	-	-	800	880	1085	1193	1280	1440	1736	1953
1-1/4	31.75	-	-	-	-	1120	1240	1519	1681	1820	2000	2468	2712
1-3/8	34.93	-	-	-	-	1460	1680	1980	2278	2380	2720	3227	3688
1-1/2	38.10	-	-	-	-	1940	2200	2631	2983	3160	3560	4285	4827

*Thick Nuts must be used with Grade 8 bolts

METRIC BOLT TORQUE SPECIFICATIONS



Size of Screw	Property Class	Course Thread			Fine Thread		
		Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
M6	5.6	1.0	3.6-5.8	4.9-7.9	-	-	-
	8.8		5.8-9.4	7.9-12.7		-	-
	10.9		7.2-10	9.8-13.6		-	-
M8	5.6	1.25	7.2-14	9.8-19	1.0	12-17	16.3-23
	8.8		17-22	23-29.8		19-27	25.7-36.6
	10.9		20-26	27.1-35.2		22-31	29.8-42
M10	5.6	1.5	20-25	27.1-33.9	1.25	20-29	27.1-39.3
	8.8		34-40	46.1-54.2		35-47	47.4-63.7
	10.9		38-46	51.5-62.3		40-52	54.2-70.5
M12	5.6	1.75	28-34	37.9-46.1	1.25	31-41	42-55.6
	8.8		51-59	69.1-79.9		55-68	75.9-92.1
	10.9		57-66	77.2-89.4		62-75	84-101.6
M14	5.6	2.0	49-56	66.4-75.9	1.5	52-64	70.5-86.7
	8.8		81-93	109.8-126		90-106	122-143.6
	10.9		96-109	130.1-147.7		107-124	145-168
M16	5.6	2.0	67-77	90.8-104.3	1.5	69-83	93.6-112.5
	8.8		116-130	157.2-176.2		120-138	162.6-187
	10.9		129-145	174.8-196.5		140-158	189.7-214.1
M18	5.6	2.0	88-100	119.2-136	1.5	100-117	136-158.5
	8.8		150-168	203.3-227.6		177-199	239.8-269.6
	10.9		175-194	237.1-262.9		202-231	273.7-313
M20	5.6	2.5	108-130	146.3-176.2	1.5	132-150	178.9-203.3
	8.8		186-205	252-277.8		206-242	279.1-327.9
	10.9		213-249	288.6-337.4		246-289	333.3-391.6