



# INSTRUCTIONS

-J01613

REV. 06-06-2003

## HARLEY-DAVIDSON HEATED CLOTHING

### General

All the items in the Harley-Davidson Heated Clothing line may be used alone or in any combination, as long as they do not exceed the maximum amperage allowed by your motorcycle. **See the last pages of this instruction sheet or the Service Manual for your model motorcycle for more detailed information on amperage.**

#### NOTE

A Service Manual for your model motorcycle is available from any Harley-Davidson dealer.

The following heated clothing items are available from any Harley-Davidson Dealer:

Description	Part Number
H-D Heated Jacket Liner	98107-04V
H-D Heated Vest Liner	98108-04V
H-D Heated Pant Liner	98535-04V
H-D Heated Gloves	98113-04V

Above items each include a Connecting Harness and Power Switch (see below). Gloves also include a 3-Prong Harness.

#### NOTE

To use the Heated Vest Liner with *both* the Pant Liner and Gloves, it will be necessary to purchase the "Y"-Plug Splitter, part number 98539-04V, available at any Harley-Davidson Dealer.

The following accessories and replacement parts may be purchased separately from any Harley-Davidson Dealer:

Description	Part Number
Connecting Harness (battery to controller)	98536-04V
Power Switch (on/off switch)	98115-04V
Portable Thermostat (to regulate temperature)	98540-04V
Dual Control Thermostat (regulates two garments)	98541-04V
3-Prong Harness (for gloves alone)	98537-04V
"Y"-plug splitter (for two garments plus gloves)	98539-04V

#### NOTE

The items above all have coaxial connectors. In order to use previously purchased Harley-Davidson heated garments having S.A.E. plugs with these items, one or more of the following adapters may be necessary. These adapters can be purchased from any Harley-Davidson Dealer.

Description	Part Number
Controller Adapter (White):	
S.A.E. connector to coaxial socket	98543-04V
Female Pant Adapter (Yellow):	
S.A.E. connector to coaxial plug	98544-04V
Male Pant Adapter (Black)	
S.A.E. connector to coaxial plug	98545-04V

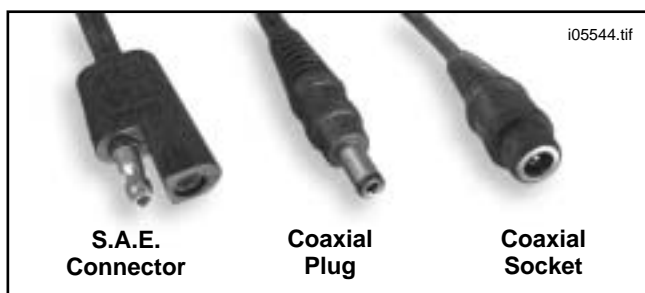


Figure 1. Connector Types

#### NOTE

Please read all the warnings and cautions that follow for proper usage of your Harley-Davidson Heated Clothing.

### WARNING

To reduce the risk of burns, electric shock and fire, which could result in death or serious injury, the Harley-Davidson Heated Clothing must be used in accordance with the following instructions:

- Use the Harley-Davidson Heated Clothing only on a 12 Volt DC circuit.
- Unplug the Harley-Davidson Heated Clothing when not in use.
- Harley-Davidson Heated Clothing is not to be used by an invalid, sleeping or unconscious person, a person with poor blood circulation, a paralyzed person or a person with diabetes.
- Do not use the cord as a handle.
- Do not crush the Harley-Davidson Heated Clothing and avoid sharp folds.
- Do not wear the Harley-Davidson Heated Vest or Jacket directly next to the body. These items are designed to be worn with a light shirt underneath.
- Never fold or store Harley-Davidson Heated Clothing while plugged into the motorcycle.
- Save these instructions.

### CAUTION

It is possible to overload your motorcycle's charging system by adding too many electrical accessories. If your combined electrical accessories operating at any one time consume more electrical current than your vehicle's charging system can produce, the electrical consumption can discharge the battery and cause vehicle electrical system damage.

See a Harley-Davidson dealer for advice about the amount of current consumed by additional electrical accessories, or for necessary wiring changes. (00211a)

#### NOTE

See Section 8 of the Service Manual for additional information on testing for voltage output and amperage draw.

## Connecting Harness Installation

### **⚠ WARNING**

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect battery cables (negative cable first) before proceeding.

### **⚠ WARNING**

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

1. Refer to the SEAT and BATTERY sections of your Owner's or Service Manual. Remove the seat and disconnect the battery cables, negative cable first.

### **⚠ WARNING**

Use only the connecting harness supplied with your Harley-Davidson Heated Clothing. DO NOT use the battery tender harness that may already be installed on your motorcycle.

Failure to install the positive ring terminal (with fuse) of the supplied connecting harness to the positive (+) battery terminal could result in burns, electrical shock and fire which could result in death or serious injury.

### **⚠ WARNING**

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

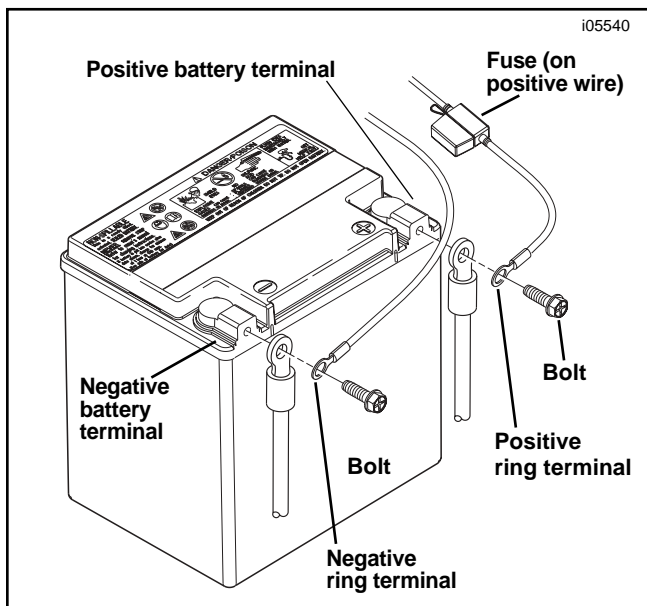


Figure 2. Positive and Negative Battery Terminals

2. See Figure 2. Install the positive ring terminal of the connecting harness to the battery as follows:
  - a. Place the positive ring terminal from the connecting harness (the cord with the fuse) onto the positive battery screw.
  - b. Place the positive battery cable ring terminal onto the screw threads.
  - c. Reattach the screw to the positive battery terminal, but do not tighten.
3. Install the negative ring terminal of the connecting harness to the battery as follows:
  - a. Place the negative ring terminal from the connecting harness (the cord without the fuse) onto the negative battery screw.
  - b. Place the negative battery cable ring terminal onto the screw threads.
  - c. Reattach the screw to the negative battery terminal, but do not tighten.

### **⚠ WARNING**

Be certain the Connecting Harness cords are not pinched. A pinched cord could result in a fire or electrical damage to the motorcycle and/or riding gear which could result in death or serious injury.

4. Secure the Connecting Harness cords to the motorcycle frame with cable straps. Be certain the cords, fuse and connector will not be pinched.
5. See Figure 3. The Connecting Harness socket should hang out under the left-hand side of the seat about 2 to 3 inches (50 to 75 mm).
6. Tighten the battery screws, negative side first, then reinstall the seat.

### **⚠ WARNING**

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)



Figure 3. Connector Should Hang 2-3 Inches Below Seat

## Connecting Heated Clothing

### **⚠ WARNING**

Harley-Davidson Heated Clothing must be used with the provided power switch (H-D part number 98115-04V) or with an available thermostat (H-D part number 98540-04V or 98541-04). Failure to do so may cause burns, which could result in serious injury.

### **⚠ WARNING**

If Harley-Davidson Heated Clothing will be worn by both rider and passenger, install two battery to controller Connecting Harnesses (H-D part number 98536-04V) to the battery terminals.

Do not connect clothing for more than one person to a single red socket terminal, power switch or thermostat. Heated Clothing cords could become entangled, distracting the rider, which could result in death or serious injury.

### **⚠ CAUTION**

Unplug the power cord before getting off the motorcycle. Attempting to get off the motorcycle with the clothing still connected may result in minor or moderate injury.

### **CAUTION**

Do not plug the power wire into the short plugs located at the waist of the vest liner or at the waist and arms of the jacket liner. These short plugs are intended only to plug in additional garments. Plugging the power wire into the short plugs may cause damage to the garments.

1. Plug the red plug terminal on the standard power switch (see Figure 4) or optional thermostat (Figures 5 or 6) into the red socket terminal from the connecting harness. **If the thermostat is not plugged in correctly, it will not work.** The thermostat may be mounted to the motorcycle using the provided Velcro® strips.

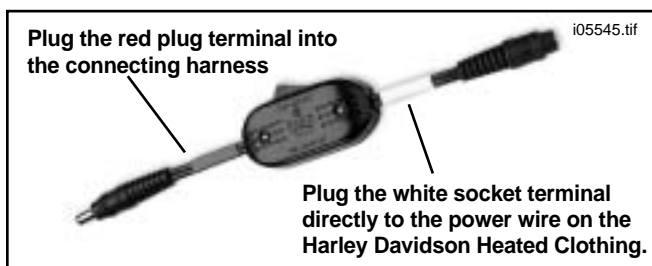


Figure 4. Power Switch 98115-04V  
(Supplied with Each Garment)

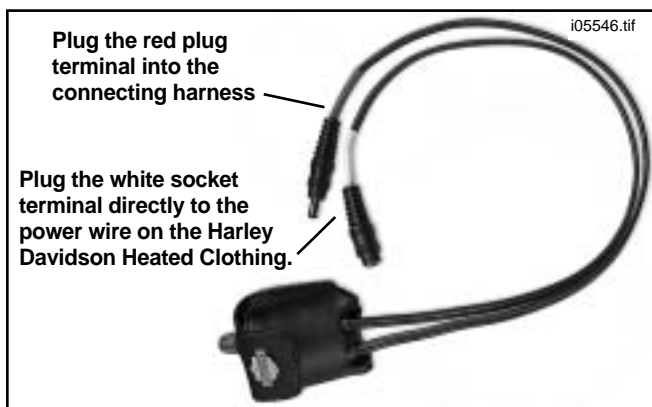


Figure 5. Optional Portable Thermostat 98540-04V

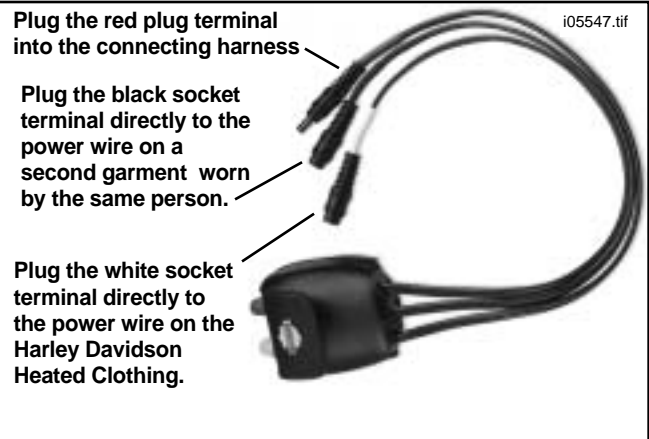


Figure 6. Optional Dual Control Thermostat 98541-04V

2. The white socket terminal at the other end of the power switch or optional thermostat (and the black socket terminal on the Dual Control Thermostat) connects directly to the power wire on Harley-Davidson Heated Clothing as follows:

- **Harley-Davidson Heated Jacket Liner:** See Figure 7. The long, white plug terminal at the waist is the garment's power wire. Plug the power wire directly into the white socket terminal on the power switch or thermostat.

The jacket liner has a short yellow socket terminal, also at the waist, which can provide power to an additional garment, such as heated socks or the Harley-Davidson Heated Pant Liner.

In addition, there are short black socket terminals at the end of each arm which can be used to plug in Harley-Davidson Heated Gloves. A short black plug terminal at the waist provides power to the gloves:

- Connect the black socket terminal from the Dual Control Thermostat to this plug.
- Connect the yellow socket terminal from the jacket liner to this plug when the Power Switch or Portable Thermostat is used

There are convenient pockets in the jacket liner to store the glove terminals when not in use.

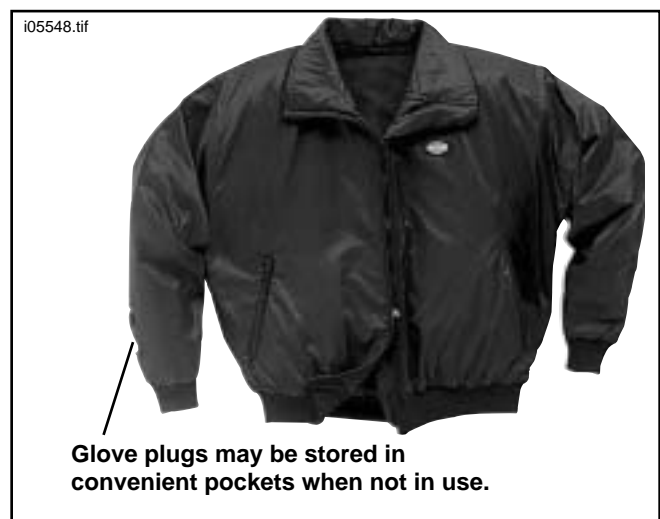


Figure 7. Harley-Davidson Heated Jacket Liner

- **Harley-Davidson Heated Vest Liner:** The long, white plug terminal at the waist is the garment's power wire. Plug the power wire directly into the white socket terminal on the power switch or thermostat.

The vest liner has a short yellow socket terminal, also at the waist, which can provide power to an additional garment, such as heated socks or the Harley-Davidson Heated Pant Liner.

- **To use the Heated Vest Liner with both the Gloves and Pant Liner,** the Harley Davidson "Y"-Plug Splitter (part number 98539-04V, available at any Harley Davidson Dealer) must be used.

Connect the white plug of the splitter into the yellow socket terminal at the waist of the vest, and the two black plugs of the splitter for the gloves and pant liner.

- **Harley-Davidson Heated Pant Liner:** The yellow plug terminal at the waistband is the garment's power wire. Plug the power wire directly into the white socket terminal on the power switch or thermostat.

If the Pant Liner is worn with either the Harley Davidson Heated Jacket Liner or Vest Liner, the pants may be plugged directly into the yellow socket terminal located at the waist of the jacket or vest.

The pant liners also have short plugs at the end of each leg which are to be used to plug in heated socks. There are convenient pockets to store the pant leg plugs when not in use.

- **Harley-Davidson Heated Gloves:** See Figure 8. When used with the Harley Davidson Heated Jacket Liner, the gloves may be plugged directly into the plugs at the end of each arm.

When used without the jacket liner, plug the 3-Prong Harness (H-D part number 98537-04, included with the gloves) directly into the white socket terminal on the power switch or thermostat. The harness is long enough so that the cords can run up inside a shirt or jacket and extend down the sleeves to plug into the gloves.



Figure 8. Harley-Davidson Heated Glove

## Connecting Multiple Garments

The following illustrations show some typical garment combinations and the correct connection methods to use.

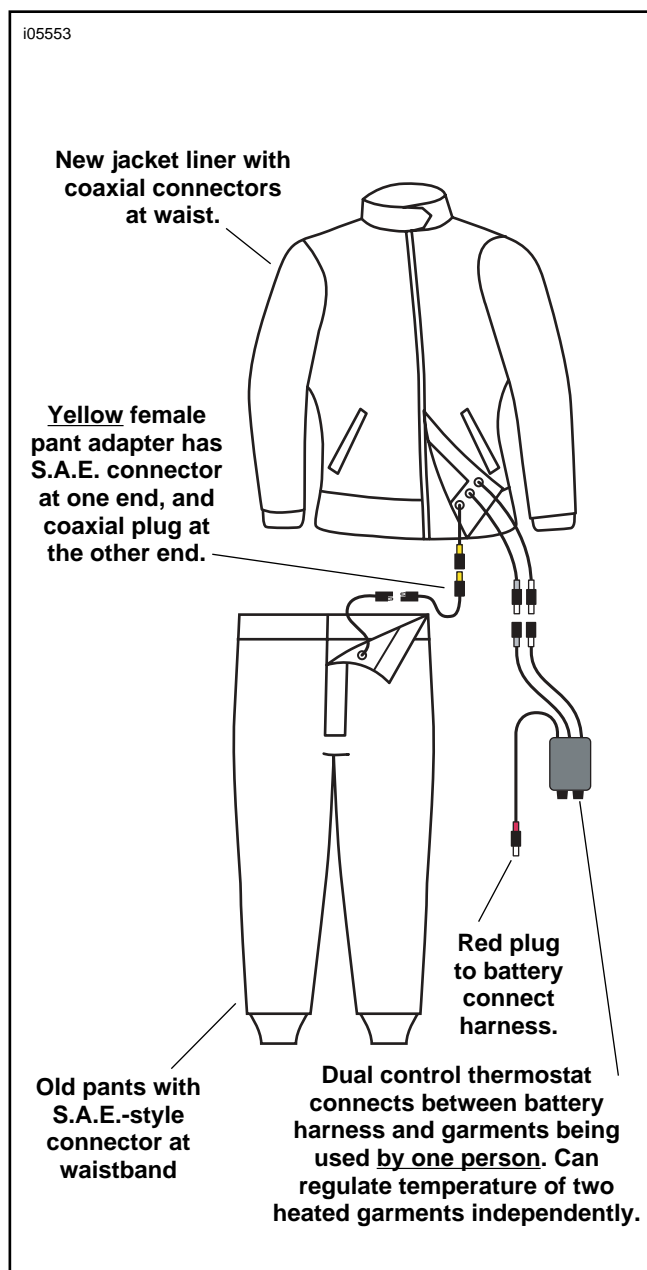
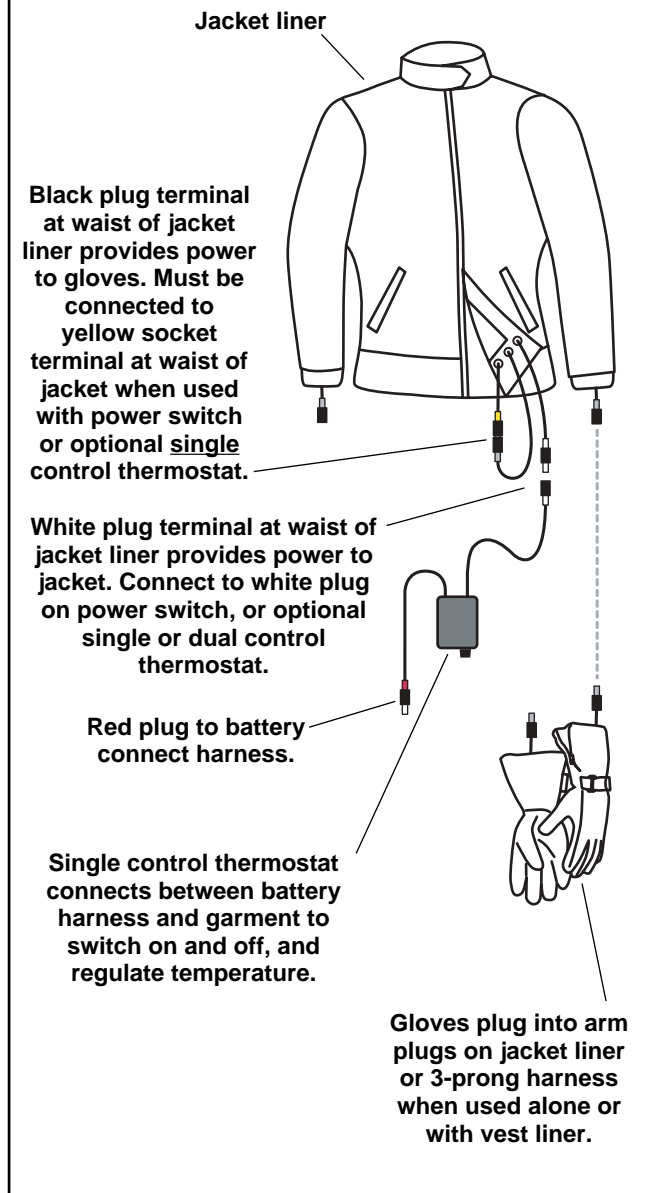
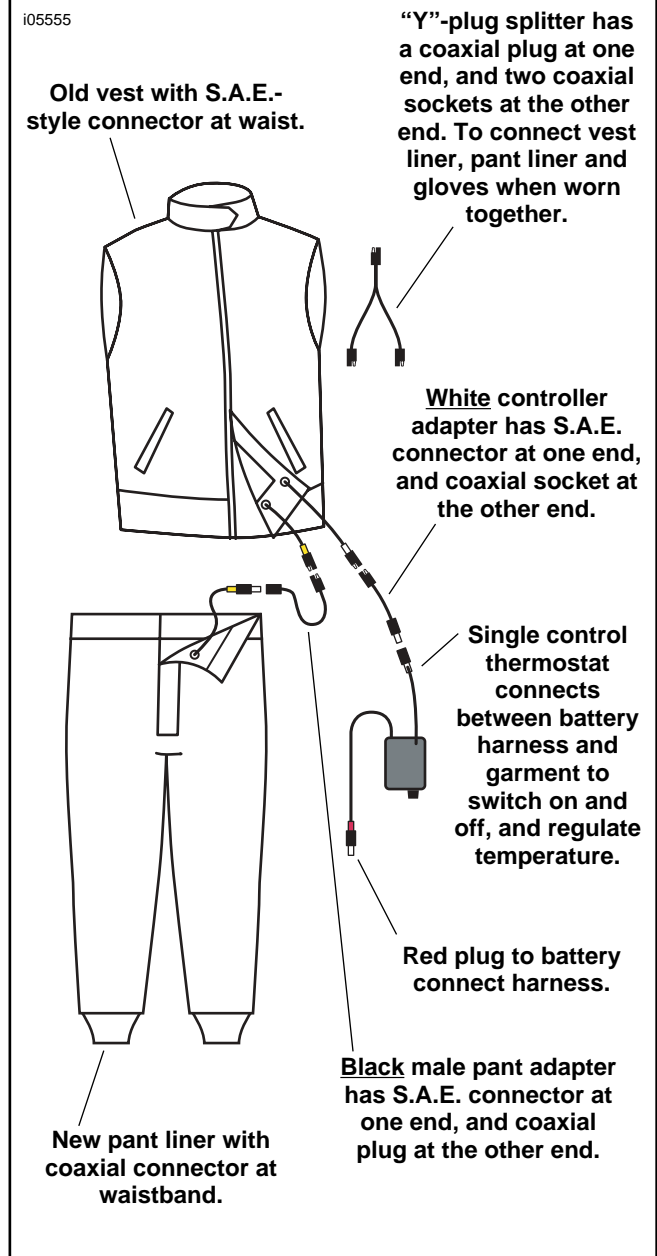


Figure 9. New Jacket Liner to Old Pants with New Dual Control Thermostat



**Figure 10. Jacket Liner and Gloves with Single Control Thermostat**



**Figure 11. Old Vest to New Pant Liner with New Single Control Thermostat**

## Guidelines

- Use only the harnesses, switches and thermostats provided with or sold specifically for use with your Harley-Davidson Heated Clothing.
- For maximum liner warmth, keep the wind off of your Harley-Davidson Heated Jacket, Vest or Pant Liners. Your heated liner should be worn under windproof clothing.
- Wear only one layer of clothing under your Harley-Davidson Heated Clothing. A cotton or silk turtleneck under your heated vest or jacket liner is ideal.
- If your Harley-Davidson Heated Clothing does not heat, check all connections for tightness and wires for proper routing and connection. Also check the fuse on the connecting harness. If the thermostat does not operate, check to be sure it is plugged in correctly, per instructions in Step 1.

## CAUTION

It is possible to overload your motorcycle's charging system by adding too many electrical accessories. If your combined electrical accessories operating at any one time consume more electrical current than your vehicle's charging system can produce, the electrical consumption can discharge the battery and cause vehicle electrical system damage.

See a Harley-Davidson dealer for advice about the amount of current consumed by additional electrical accessories, or for necessary wiring changes. (00211a)

## NOTE

See Section 8 of the Service Manual for additional information on testing for voltage output and amperage draw.

## Average Amperage Draw Per Item

Item	Wattage	With a 12 volt battery
Jacket Liner	77 Watts	6.00 Amps (cold)
Vest Liner	44 Watts	3.87 Amps (cold)
Pant Liner	44 Watts	3.87 Amps (cold)
Gloves	22 Watts	2.28 Amps (cold)

### CAUTION

Do not switch on the Harley-Davidson Heated Clothing if the motorcycle engine is turned off or running below the indicated engine speed or damage to the garments and electrical system may occur.

### NOTE

The garments may be switched on as long as the engine speeds indicated in the following charts are maintained. See the "Typical Charging System Maximum Output" Chart (Figure 10) and the Family Chart specific to your motorcycle.

### NOTE

Be aware that other electrical loads, such as lamps, may already be present. These loads will reduce the amperage available for the heated garments, and the recommendations must be modified accordingly.

**Remember, you must add up the amperage draw and battery requirements of ALL electrical items in use.**

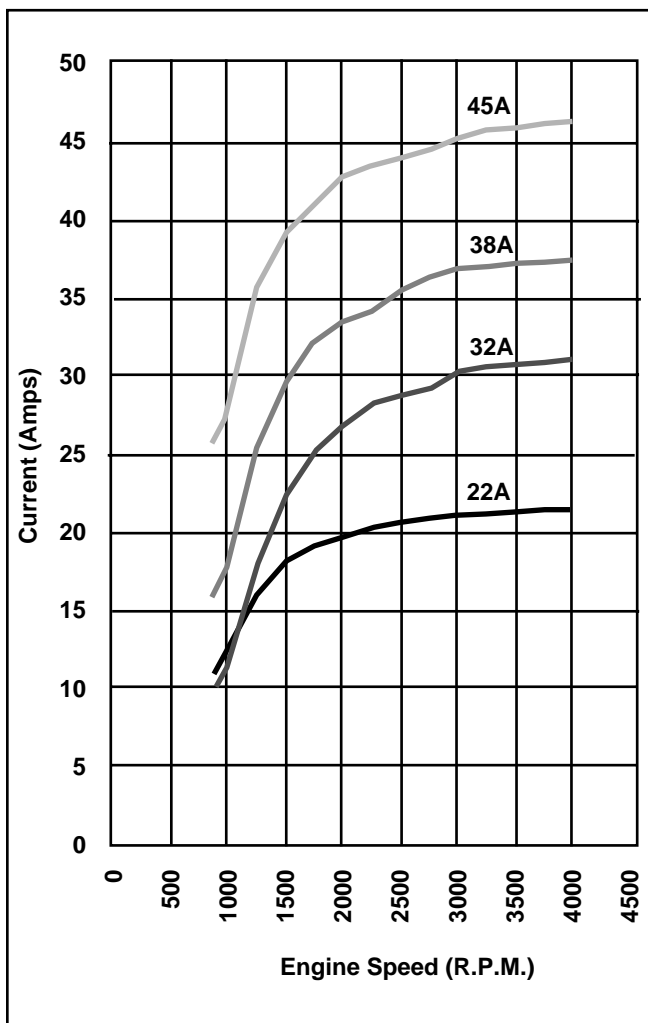


Figure 10. Typical Charging System Maximum Output

XL Motorcycle Family							
Garment Type	Power Required [Watts]	Load Current [Amps]	Alternator Type	Available amps @ R.P.M.:			Recommendation
				1000	1500	3000	
Jacket Liner	77	5.9	22	-3.7	2.1	5.4	OK above 1500 R.P.M.
Vest Liner	44	3.4	22	-1.2	4.6	7.9	
Pants Liner	44	3.4	22	-1.2	4.6	7.9	
Gloves	22	1.7	22	0.5	6.3	9.6	

Assumptions:

Nominal Current Usage = 8 Amps

2 Amps needed to maintain battery charge.

FX Motorcycle Family							
Garment Type	Power Required [Watts]	Load Current [Amps]	Alternator Type	Available amps @ R.P.M.:			Recommendation
				1000	1500	3000	
Jacket Liner	77	5.9	38	-6.1	5.9	12.7	OK above 1500 R.P.M.
Vest Liner	44	3.4	38	-3.6	8.4	15.2	
Pants Liner	44	3.4	38	-3.6	8.4	15.2	
Gloves	22	1.7	38	-1.9	10.1	16.9	

Assumptions:

Nominal Current Usage = 16 Amps

2 Amps needed to maintain battery charge.

FXD Motorcycle Family (2003 and Earlier)							
Garment Type	Power Required [Watts]	Load Current [Amps]	Alternator Type	Available amps @ R.P.M.:			Recommendation
				1000	1500	3000	
Jacket Liner	77	5.9	32	-4.4	6.7	14.0	OK above 1500 R.P.M.
Vest Liner	44	3.4	32	-1.9	9.2	16.5	
Pants Liner	44	3.4	32	-1.9	9.2	16.5	
Gloves	22	1.7	32	-0.2	10.9	18.2	

Assumptions:

Nominal Current Usage = 8 Amps

2 Amps needed to maintain battery charge.



### NOTE

The garments may be switched on as long as the engine speeds indicated in the following charts are maintained. See the "Typical Charging System Maximum Output" Chart (Figure 10) and the Family Chart specific to your motorcycle.

### NOTE

Be aware that other electrical loads, such as lamps, may already be present. These loads will reduce the amperage available for the heated garments, and the recommendations must be modified accordingly.

**Remember, you must add up the amperage draw and battery requirements of ALL electrical items in use.**

FXD Motorcycle Family (2004 and Later)							
Garment Type	Power Required [Watts]	Load Current [Amps]	Alternator Type	Available amps @ R.P.M.:			Recommendation
				1000	1500	3000	
Jacket Liner	77	5.9	38	-6.1	5.9	12.7	OK above 1500 R.P.M.
Vest Liner	44	3.4	38	-3.6	8.4	15.2	
Pants Liner	44	3.4	38	-3.6	8.4	15.2	
Gloves	22	1.7	38	-1.9	10.1	16.9	

Assumptions:

Nominal Current Usage = 16 Amps

2 Amps needed to maintain battery charge.

FL (EFI) Motorcycle Family							
Garment Type	Power Required [Watts]	Load Current [Amps]	Alternator Type	Available amps @ R.P.M.:			Recommendation
				1000	1500	3000	
Jacket Liner	77	5.9	45	-5.7	6.5	12.3	OK above 1500 R.P.M.
Vest Liner	44	3.4	45	-3.2	9.0	14.8	
Pants Liner	44	3.4	45	-3.2	9.0	14.8	
Gloves	22	1.7	45	-1.5	10.7	16.5	

Assumptions:

Nominal Current Usage = 25 Amps

2 Amps needed to maintain battery charge.

FL (Carbureted) Motorcycle Family							
Garment Type	Power Required [Watts]	Load Current [Amps]	Alternator Type	Available amps @ R.P.M.:			Recommendation
				1000	1500	3000	
Jacket Liner	77	5.9	38	-4.1	7.9	14.7	OK above 1500 R.P.M.
Vest Liner	44	3.4	38	-1.6	10.4	17.2	
Pants Liner	44	3.4	38	-1.6	10.4	17.2	
Gloves	22	1.7	38	-0.1	12.1	18.9	

Assumptions:

Nominal Current Usage = 14 Amps

2 Amps needed to maintain battery charge.

VRSC Motorcycle Family							
Garment Type	Power Required [Watts]	Load Current [Amps]	Alternator Type	Available amps @ R.P.M.:			Recommendation
				1000	1500	3000	
Jacket Liner	77	5.9	38	-11.1	0.9	7.7	OK above 1500 R.P.M.
Vest Liner	44	3.4	38	-8.6	3.4	10.2	
Pants Liner	44	3.4	38	-8.6	3.4	10.2	
Gloves	22	1.7	38	-6.9	5.1	11.9	

Assumptions:

Nominal Current Usage = 21 Amps

2 Amps needed to maintain battery charge.