Maintenance and Service Manual

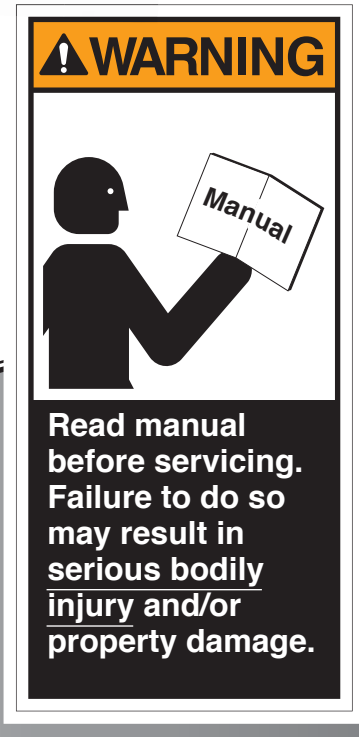
Wheelchair-Accessible Lowered Floor Conversion (Foldout Ramp)

featuring 2010

Honda Minivans

BraunAbility®

Because Life is a Moving Experience®



Braun Lowered Floor Conversions featuring 2010 Honda Minivans

36122 Rev B
March 2011

INTRODUCTION

Introduction

Braun lowered floor conversions are designed to provide years of pleasure and mobility independence. Familiarity with proper operation and maintenance procedures will help ensure safe, troublefree operation.

Safety precautions, maintenance and troubleshooting details are provided. Wiring Diagrams and Electrical Schematics are provided to aid in troubleshooting. A Repair Parts section with exploded views and corresponding parts lists are also provided.

Refer to the information applicable for the conversion you are servicing and disregard the information that does not apply.

Warranty and Return Authorization

Refer to the Limited Warranty Booklet for detailed terms and provisions. When processing any warranty claims (parts, repairs, etc.), all requests must be processed through the Braun Corporation Product Support Department. Product Support will issue a Return Material Authorization (RMA) number and detail the procedures required for processing returns and/or authorizing credit.

⚠WARNING

Maintenance, lubrication, troubleshooting and service procedures must be performed as specified by an authorized service technician. Failure to do so may result in serious bodily injury and/or property damage.

The last eight digits of the vehicle identification number (VIN) must be provided when filing a warranty claim or ordering parts.

Operation Quick Reference Guide

Operation Overview

This overview provides a simplified explanation of operation. Read the operator's manual for complete details. Contact The Braun Corporation at 1-800-THE LIFT® if any of this information is not understood.

Power Operation

Power functions are managed by the electronic control system. The control system can be activated using the OEM remote keyless entry transmitter or one of the interior control switches.

Press and hold until LED blinks and the applicable function begins 

OEM Remote Keyless Entry Transmitter

Interior mounted control switches display one of these graphics.  or 

One-Touch Control Activation

Power door, kneel and ramp functions are activated by pressing and holding a control switch until the applicable function begins (press and hold remote entry transmitter switch until LED blinks).

Open Functions: When activating the Open functions, the power door opens, the kneel system lowers the rear of the vehicle and the ramp deploys.

Close Functions: When activating the Close functions, the ramp stows, the kneel system raises the rear of the vehicle and the power door closes.

Manual Operation

The passenger side power sliding door and power ramp can be manually operated. Refer to operator manual for further details.

CONTENTS

SAFETY PRECAUTIONS

Safety Precautions

⚠WARNING

Read this manual, the conversion's operator's manual and supplements before performing operation, maintenance or service procedures. Failure to do so may result in serious bodily injury and/or property damage.

⚠WARNING Maintenance and service procedures must be performed only by authorized service personnel.

⚠WARNING Perform maintenance and lubrication procedures exactly as outlined in the Maintenance and Lubrication Schedule contained in this manual.

⚠WARNING Perform troubleshooting and service procedures as outlined in this manual and/or service bulletins supplied with replacement parts.

⚠WARNING Replacement parts must be Braun authorized replacements.

⚠WARNING Do not attempt to interface aftermarket control systems without authorization from The Braun Corporation.

⚠WARNING Do not use accessory devices not authorized by The Braun Corporation.

⚠WARNING Keep clear of area in which the vehicle kneels (lowers).

⚠WARNING Keep clear of area in which ramp operates.

⚠WARNING Never modify (alter) a Braun Corporation lowered floor minivan conversion.

⚠WARNING Do not install a raised top on a Braun Corporation lowered floor minivan conversion.

⚠WARNING Use of a Braun Corporation lowered floor minivan conversion for towing is prohibited.

⚠WARNING Failure to follow these safety precautions may result in serious bodily injury and/or property damage.

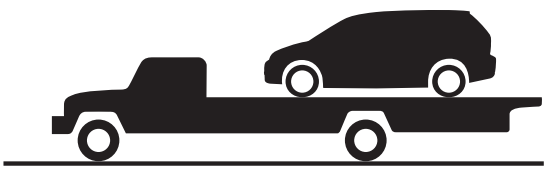
Towing

Towing with a Lowered Floor Conversion

Use of a lowered floor conversion vehicle for towing is prohibited.

Transporting a Lowered Floor Conversion

If case of service, The Braun Corporation recommends that lowered floor conversion vehicles be transported on a trailer rather than towed with one set of wheels suspended and the other set of wheels remaining in road contact.



Trailer Transport

Maintenance and Service Requirements

Braun lowered floor minivan conversions must be maintained and serviced by a Braun authorized service representative who has attended and been certified by The Braun Corporation Sales and Service School for Braun Mobility Products.

Read and become familiar with the operating procedures outlined in the applicable operator's manual and the maintenance and troubleshooting information contained in this manual before beginning operation, maintenance or service procedures. Contact The Braun Corporation at 1-800-THE LIFT® if any of this information is not understood.

Electronic Control System: The electronic control system provides simple one-touch activation of power functions. For your convenience, the control system can be activated using the OEM remote keyless entry transmitter or one of the interior switches identified in the operator's manual.

Braun Corporation Aftermarket Control Systems Policy: The Braun Corporation manufactures dedicated control systems for its products. These control systems have been designed and tested for use in conjunction with specific Braun products. Braun control systems are the only control systems authorized for use with Braun products.

Do not attempt to interface aftermarket control systems without authorization from The Braun Corporation. To do so may result in serious bodily injury and/or property damage.

Preventive Maintenance

Maintenance is necessary to ensure safe and trouble free conversion operation. Encourage the consumer to perform preventive maintenance procedures. General preventive maintenance consisting of inspections along with cleaning procedures should be a part of the consumers routine.

Keeping the passenger slide door lower track pan free of debris, ice and snow is one of the most effective preventive maintenance practices to exercise. Regular preventive maintenance procedures will increase the service life of the conversion, as well as enhancing safety.

The consumer should inspect and clean frequently and routinely (minimum four weeks or 100 cycle intervals).

Note: A Preventive Maintenance section is provided in the operator's manual.

Maintenance and Lubrication Schedule

Normal vehicle maintenance must be performed as outlined in the OEM-supplied owner's manual. This maintenance is not the responsibility of The Braun Corporation.

The maintenance and lubrication procedures outlined in this schedule must be performed at the recommended scheduled intervals by a Braun authorized service representative.

Clean specified components and the surrounding area before applying lubricants. When replacing lubricated components, be sure to lubricate during installation procedures.

A "dri-film" style of light oil should be applied where Light Oil is called out (goes on wet and then dries). Lubricants of this type are available that do not attract dust and other debris.

Use of improper lubricants can attract dirt or other contaminants which could result in wear or damage to components. Avoid lubricants that can leave stains.

Some lubricants referenced in the schedule are available from The Braun Corporation (part numbers provided where specified).

All listed inspection, lubrication and maintenance procedures should be repeated at "3 month" intervals following the scheduled "6 month" maintenance. These intervals are a general guideline and will vary according to frequency of use and conditions. Exposure to severe conditions (weather, environment, contamination, heavy usage, etc.) may require inspection and maintenance procedures to be performed more often than specified.

Discontinue use immediately if maintenance and lubrication procedures are not properly performed, or if there is any sign of wear, damage, improper operation or any abnormal condition. Contact your sales representative or call The Braun Corporation at 1-800-THE LIFT®. One of our national Product Support representatives will direct you to an authorized service technician who will inspect your conversion.

⚠WARNING

Maintenance and lubrication procedures must be performed as specified by an authorized service technician. Failure to do so may result in serious bodily injury and/or property damage.

Maintenance and Lubrication Schedule

3 Months	**Foldout Ramp:** Foldout ramps vary in design. Disregard references to components not present.	
	Outboard ramp extension hinge and fasteners	Clean and lubricate with Light Oil. Resecure or replace fasteners as needed
	Inspect ramp inboard pivot points (bolts/screws and bushings/bearings) for positive securement, wear or damage	Clean and lubricate with Light Oil. Tighten, replace or correct as needed
	Inspect ramp fold pickup bearing for positive securement, alignment, wear or other damage	Replace or correct as needed. If bearing retaining bolt is not secure or is removed for service, apply Blue #242 Thread Locker Loctite to retaining bolt and tighten.
	Inspect ramp fold arm for positive securement, alignment, wear or other damage	Tighten, replace or correct as needed
	Inspect ramp fold arm bearing slot for excessive wear or damage	Replace if needed
	Inspect ramp extension chain for proper alignment, securement or other defects	Realign, resecure, replace or otherwise correct as needed
	Inspect ramp floor mounting hardware for securement (loose or missing)	Resecure, replace or correct as needed
	General	
	Lower power slide door track	Inspect for obstructions and clean (vacuum or blow out debris using compressor)
	Center power slide door track	Clean and lubricate with multi-purpose grease
	Wheelchair and occupant restraint belts and tie down track	Inspect for any defects such as cuts, fraying or any malfunction of belt, buckle or securement hardware. Clean dirt and debris from tie down track. Replace immediately if damaged.
	Inspect removable seat bases for proper engagement of latching mechanisms	Replace or correct as needed

Maintenance and Lubrication Schedule

6 Months	**Perform all procedures listed in previous section also**	
	Power Fold Ramp: • Ramp flap (extension) chain	Lubricate with Anti-Seize (14 oz. caulk tube available per Braun part no. 24710)
	Remove ramp housing cover/rear vertical panel and inspect: • Top mount bracket bolts for securement (loose or missing) • Motor mounting bolts for securement (loose or missing) • Ramp fold arm securement (collar and mounting screws) • Microswitches securement and adjustment • Microswitch wires and terminals for securement or damage	Resecure, adjust microswitches, replace damaged parts or otherwise correct as needed. Note: See 2010 Foldout Ramp Exploded views on pages 25B-26B, 29A-30A and 29B-30B.
	Inspect power source: Vehicle battery, 50 ampere fuse, vehicle engine compartment fuse block and driver side under dash-mounted fuse block.	Resecure, repair or replace
	Inspect kneel actuator assembly for: • Actuator mounting pin securement (microswitch activation block) • Inspect chain for misalignment, wear or damage • Inspect chain master-links for securement • Inspect chain idler (pulley) for securement, wear, damage or misalignment • Inspect electrical harnesses for positive connections, proper routing, wear or other damage • Kneel microswitch(es) securement, wear or other damage	Realign, resecure, replace damaged parts or otherwise correct as needed. Note: See Kneel Actuator Assembly exploded view on pages 33 & 35.
	Kneel electrical override	Check operation
	Kneel assembly chain	Lubricate with Anti-Seize (14 oz. caulk tube available per Braun part no. 24710)

Consecutive 3 Month Intervals	Repeat all previously listed inspection, lubrication and maintenance procedures at 3 month intervals.

Troubleshooting Diagnosis Chart

⚠WARNING

Troubleshooting and repair procedures must be performed as specified by an authorized service technician only. Failure to do so may result in serious bodily injury and/or property damage.

Operation should be discontinued immediately if a conversion problem occurs. Repairs should not be attempted by the consumer. Contact the sales representative or call The Braun Corporation at 1-800-THE LIFT®. One of our national Product Support representatives will direct you to an authorized service technician who will inspect your vehicle.

The cause of the problem can be determined by locating the function and related symptom in the Troubleshooting Diagnosis Charts. The specific cause and remedy can then be determined by process of elimination. Electrical Schematics and Wiring Diagrams are provided to aid in troubleshooting.

A Repair Parts section with exploded views and corresponding parts lists is also provided. Correct the problem if possible. If the problem continues, contact The Braun Corporation.

FUNCTION	SYMPTOM	POSSIBLE CAUSE	REMEDY
1.00 NO OPERATION	1.10 No Power to Conversion Systems (Circuit Problem)	1.11 Poor ground connection	Clean and tighten
		1.12 Battery terminals dirty	Clean and tighten
		1.13 Battery damaged	Replace
		1.14 Battery discharged	Charge battery
		1.15 12 volt source (check fuses for 12 volts)	Check for blown fuse, loose terminals or broken wire or cable
		1.16 Circuit breaker tripped or damaged	Reset or replace
	1.20 Power to Conversion Systems But No Operation	1.21 Transmission not in Park	Engage transmission in Park
		1.22 OEM power sliding door main switch in OFF position	Press switch to ON position
		1.23 Power slide door locked	Unlock door
		1.24 Slide door handles have been manually operated	Press a control switch
		1.25 Loose connection	Clean and tighten
		1.26 Broken wire	Repair or replace
		1.27 Wire terminal	Crimp tightly to wire
		1.28 Control switch damaged	Replace
		1.29 OEM keyless transmitter (FOB) does not function properly or damaged	Relocate to avoid interference, replace battery or replace transmitter. See OEM owner's manual.
		1.30 Braun electronic controller	Press main electronic controller reset button and try operation again. If no operation - run serial diagnostics test. If no operation - contact Braun Product Support.

TROUBLESHOOTING

FUNCTION	SYMPTOM	POSSIBLE CAUSE	REMEDY
2.00 KNEEL SYSTEM (LOWER)	**2.10 No Lower Operation**	2.11 See 1.00	
		2.12 Kneel On/Off switch is in OFF position.	Press switch to ON position
		2.13 Actuator harness disconnected or otherwise damaged	Connect, repair or replace
		2.14 Actuator damaged. Press the kneel electrical override switch to test actuator (located on ramp motor cover/interior panel).	Replace if damaged.
		2.15 Chain disconnected or otherwise damaged	Connect, repair or replace
		2.16 Kneel Lowered microswitch harness disconnected/damaged or microswitch damaged	Connect/repair harness or replace microswitch
		2.17 Kneel electrical override switch damaged or disconnected	Check connection or replace
	2.20 Faulty Kneel (Lower) Operation	2.21 Mechanical binding	Check and correct
		2.22 Misalignment or damage to kneel system components. Inspect kneel actuator assembly for: • Actuator mounting pin securement (loose or missing) • Inspect chain for wear, misalignment, or other damage • Inspect chain pulley for securement, wear, misalignment or damage	Connect, replace or otherwise correct as needed
3.00 POWER DOOR (OPEN)	**3.10 No Open Operation (Motor Does Not Run)**	3.11 See 1.00	
		3.12 Doors locked	Unlock doors
		3.13 Power door motor harness disconnected or damaged	Correct or contact Braun Product Support
		3.14 Power door motor damaged	Contact Honda Service Center
	3.20 Motor Runs But Door Does Not Move	3.21 Misaligned or otherwise damaged drive cable or door track	Correct or contact Braun Product Support
		3.22 Power door motor clutch failure	Contact Honda Service Center
	3.30 Faulty Open Operation	3.31 Obstruction in door path	Remove obstruction
		3.32 Mechanical binding	Check and correct
	3.40 Door Does Not Open Fully	3.41 Door doesn't catch full open position hold latch	Correct or contact Braun Product Support
		3.42 Power sliding door module (PSDM) needs recalibrated for extended travel	Correct or contact Braun Product Support
		3.43 See 3.30	

FUNCTION	SYMPTOM	POSSIBLE CAUSE	REMEDY
4.00 FOLDOUT RAMP DEPLOY	**4.10 No Unfold (Deploy) Operation**	4.11 See 1.00 and 3.41	
		4.12 No door full open signal	Correct or contact Braun Product Support
		4.13 Ramp motor harness disconnected or damaged	Connect, repair or replace
		4.14 Loose, damaged or missing fold arm securement collar/coupling and/or screws	Tighten, replace or otherwise correct as needed
		4.15 Ramp Deploy microswitch out of adjustment or damaged	Check connection, adjust or replace.
		4.16 Ramp motor damaged	Replace motor
		4.17 Ramp electrical override switch damaged or disconnected	Check connection or replace.
	4.20 Ramp Contacts Door	4.21 Door not fully open	Correct or contact Braun Product Support
		4.22 See 3.41	
	4.30 Faulty Unfold (Deploy) Operation	4.31 Ramp Deploy microswitch harness disconnected or damaged	Connect, repair or replace
		4.32 Misalignment or damage to: • Ramp fold bearing • Ramp fold arm • Ramp fold arm bearing slot • Ramp pivot points or hinge(s)	Realign, tighten, replace damaged parts or otherwise correct as needed
		4.33 Mechanical binding	Check and correct
		4.34 See 3.41 and 4.15	
		4.35 Obstruction detected resulting in excessive motor current	Press main electronic controller reset button and try again. If no operation - contact Braun Product Support.
		4.36 Ramp module ramp select switch set to infloor position	Press ramp select switch to foldout position
	4.40 Faulty Ramp Extension Unfold (Deploy)	4.41 Ramp extension chain broken, detached, misaligned or otherwise damaged	Replace, attach, realign or otherwise correct
		4.42 Lack of lubrication	Lubricate - See Maintenance and Lubrication Schedule
		4.43 Ramp hinge damage	Correct or replace as needed
		4.44 See 4.35	
5.00 FOLDOUT RAMP STOW	**5.10 No Fold (Stow) Operation**	5.11 See 1.00	
		5.12 Ramp Stow Position microswitch out of adjustment or damaged	Check connection, adjust or replace.
		5.13 Controller doesn't receive door close signal	Correct or contact Braun Product Support
		5.14 See 4.13, 4.14, 4.16 and 4.17	
	5.20 Faulty Fold (Stow) Operation	5.21 Ramp Stow Position microswitch harness disconnected or damaged	Connect, repair or replace
		5.22 Fold arm support/stop out of adjustment	Adjust support/stop for more travel
		5.23 See 3.41, 4.13, 4.14, 4.32, 4.33, 4.35, 4.42 and 4.43	

TROUBLESHOOTING

FUNCTION	SYMPTOM	POSSIBLE CAUSE	REMEDY
6.00 POWER DOOR (CLOSE)	**6.10 No Close Operation**	6.11 See 3.10, 4.12 and 5.12 6.12 Power slide door module (PSDM) did not see stowed signal	Correct or contact Braun Product Support
	6.20 Motor Runs - Door Does Not Move	6.21 See 3.20	
	6.30 Faulty Operation	6.31 See 3.30	
	6.40 Door Does Not Close Fully (Door Kickback)	6.41 See 3.30 6.42 Ramp obstructing door	Adjust ramp Stow Position microswitch inward (toward cabin area)
	6.50 Door Contacts Ramp When Closing	6.51 Ramp Stow Position microswitch out of adjustment 6.52 See 4.40, 5.12 and 5.20	Adjust Ramp Stow Position microswitch inward (toward cabin area)
7.00 KNEEL SYSTEM (RAISE)	**7.10 No Raise Operation**	7.11 See 1.00, 2.12, 2.13, 2.14, 2.15 and 2.17 7.12 Kneel Raised microswitch harness disconnected/damaged or microswitch damaged	Connect/repair harness or replace microswitch
	7.20 Faulty Operation	7.21 See 2.20	
8.00 KNEEL ELECTRICAL OVERRIDE (RAISE)	**8.10 No Operation**	8.11 See 1.10, 2.13, 2.14, 2.15 and 2.17	
	8.20 Faulty Operation	8.21 See 2.20	
9.00 RAMP ELECTRICAL OVERRIDE (STOW)	**9.10 No Operation**	9.11 See 1.10, 4.13, 4.14 and 4.16	
	9.20 Faulty Operation	9.21 See 4.13, 4.32, 4.33, 4.41, 4.42 and 4.43	

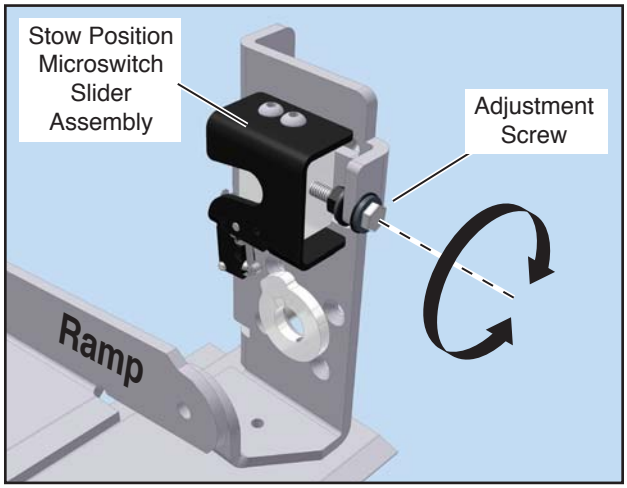
Ramp Microswitch Adjustment

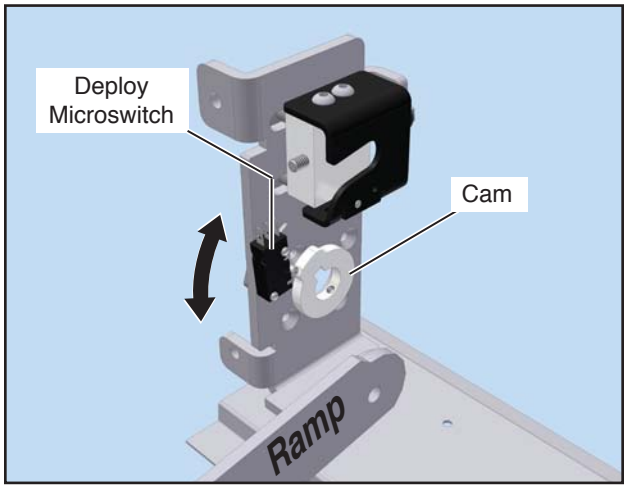
The ramp motor assembly is equipped with two microswitches, the deploy microswitch and stow position microswitch.

The deploy microswitch cuts the ramp motor when the platform reaches a position where the ramp will complete the deploy function by the force of gravity (ramp to ground level).

The stow position microswitch determines the full stow position (how far the ramp stows inside the vehicle).

Remove the ramp motor assembly interior cover to access microswitches (located rear of the passenger slide door). Note: It is not necessary to remove any other interior panels.





Stow Position Microswitch Adjustment: An adjustment screw moves the position of the stow position slider assembly inward and outward. Turn the screw clockwise to adjust the ramp stowed position inward. Turn the screw counterclockwise to adjust the ramp position outward. Ensure the ramp does not obstruct the power slide door (check per following procedure).

Door Obstruction: Manually open the slide door fully. Move the top of the ramp out slightly until the ramp enters the path of the door. Press a control switch. Caution: Observe and stop door if ramp does not stow fully to avoid damage. If the ramp stows fully and the door closes, the microswitch is adjusted properly. If the door contacts the ramp, the stow microswitch needs to be adjusted inward. Adjust microswitch slider slightly and repeat procedures.

Deploy Microswitch Adjustment: The deploy microswitch is cam activated. The microswitch is secured with two mounting screws. The microswitch can slide in a rotary motion to change it's position is relation to the cam. The deploy microswitch cuts power to the ramp motor, allowing the ramp to gravity down and complete the deploy function. Adjust the switch to allow gravity to complete the deploy operation. Ensure the ramp motor shuts off before the ramp reaches the horizontal position or below.

MICROSWITCHES

Kneel Microswitches - Below Floor Kneel Assembly

The below floor actuator assembly is equipped with two fixed position microswitches (not adjustable). See page 34. A bracket (vertical tab) at the end of the actuator shaft trips the microswitches as the shaft extends and retracts. If the kneel switches are not activated (tripped), the kneel actuator will clutch (ratchet) continuously for approximately 10 seconds at end of actuator travel.

Kneel Actuator Access: Remove the kneel assembly cover on the vehicle floor under the third row passenger side seat.

Note: Changing the kneel chain length is prohibited.

Kneel Microswitches - Above Floor Kneel Assembly

The above floor kneel actuator assembly is equipped with two adjustable position microswitches (shown below and on page 35). An activation pin at the end of the actuator shaft trips the microswitches as the shaft extends and retracts. Adjustment procedures detailed below.

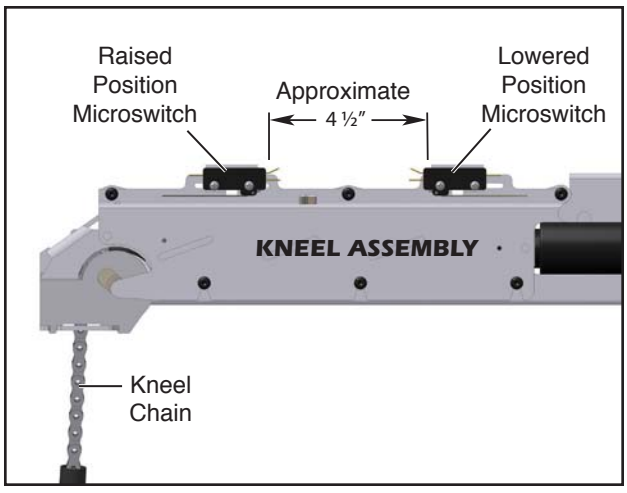
Kneel Actuator Access: Remove the passenger side rear interior panel. OEM panel removal/ installation procedures have not been altered by conversion process.

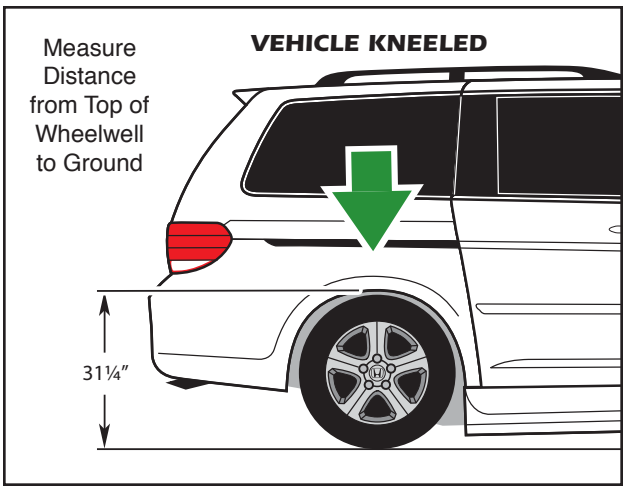
Raised Position Microswitch Adjustment: Fully extend the actuator (raised position). The raised microswitch cuts power to the kneel actuator to stop the raise function. The microswitch is secured with two mounting screws. Loosen mounting screws. Slide the switch toward the activation pin (toward the rear of the vehicle) until the switch closes (clicks). From this position, slide the switch an additional 1/4" toward the pin to ensure activation. Tighten mounting screws.

Lowered Position Microswitch Adjustment: The lowered microswitch cuts power to the kneel actuator to stop the lower function. The microswitch is secured with two mounting screws. Loosen mounting screws. Position the switch approximately 4 1/2" from the raised microswitch as shown below. Tighten mounting screws. Confirm proper adjustment by performing kneel position test below.

Kneel Position Test: With vehicle in kneeled position, measure the distance from the ground to the top of the passenger side rear wheelwell. Adjusting the kneel height lower than 31 1/4" is prohibited. If additional kneel height is required, move the lowered microswitch rearward the same distance as additional desired height. Tighten mounting screws.

Note: Changing the kneel chain length is prohibited.

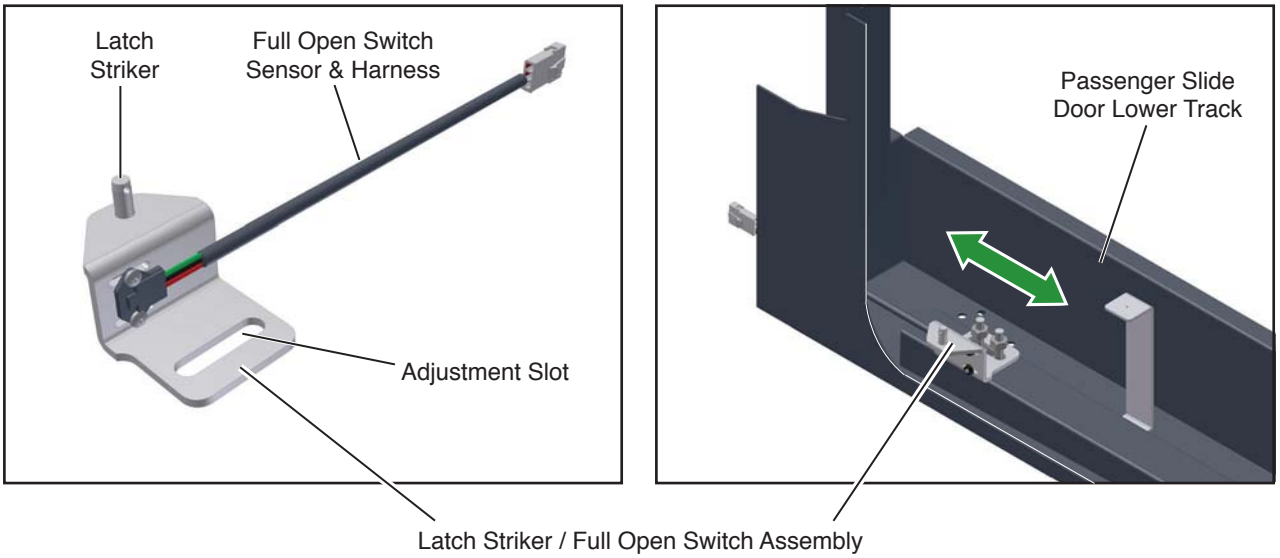




Passenger Slide Door - Latch Striker / Full Open Switch

The passenger slide door latch striker/full open switch assembly consists of a striker for the door latch and the full open switch sensor. The striker pin location determines the width of the slide door opening. The full open switch tells the electronic controller the position of the slide door.

The assembly can be adjusted to achieve a wider door opening and provide clearance for the ramp. The full open switch, as part of the assembly, is factory located. The assembly works as a unit. Adjustment (repositioning) of the latch striker affects activation of the full open switch sensor.



Latch Striker / Full Open Switch Location: The assembly is mounted to the lower door track of the passenger slide door (shown below right).

Latch Striker Assembly Adjustment: Activate the Open functions. The ramp should not be obstructed by the door, and the door should fully latch the striker under power operation. If the latch striker needs adjustment, the assembly is secured with two mounting screws. Loosen mounting screws for adjustment. Slide the assembly toward the rear of the vehicle to increase the door opening. Slide the assembly toward the front of the vehicle to allow the door latch to fully engage the striker. Secure mounting screws. Perform the test below to confirm proper adjustment.

Full Open Switch Adjustment: The full open switch is factory located and should not require adjustment. If the situation for adjustment arises, the switch sensor is mounted with (2) nuts and (2) screws. Loosen the fasteners and slide the sensor for adjustment. Perform the test below to confirm proper sensor adjustment.

Latch Striker / Full Open Switch Adjustment Test: Activate the Open functions. The ramp should not be obstructed by the door and the door should fully latch the striker. The controller "Door Full Open" LED should illuminate (see page 17). Manually pull the slide door handle. The door should unlatch (do not slide). If adjusted properly the LED should shut off. Repeat procedures until test is successful.

BELOW FLOOR OBSTRUCTIONS

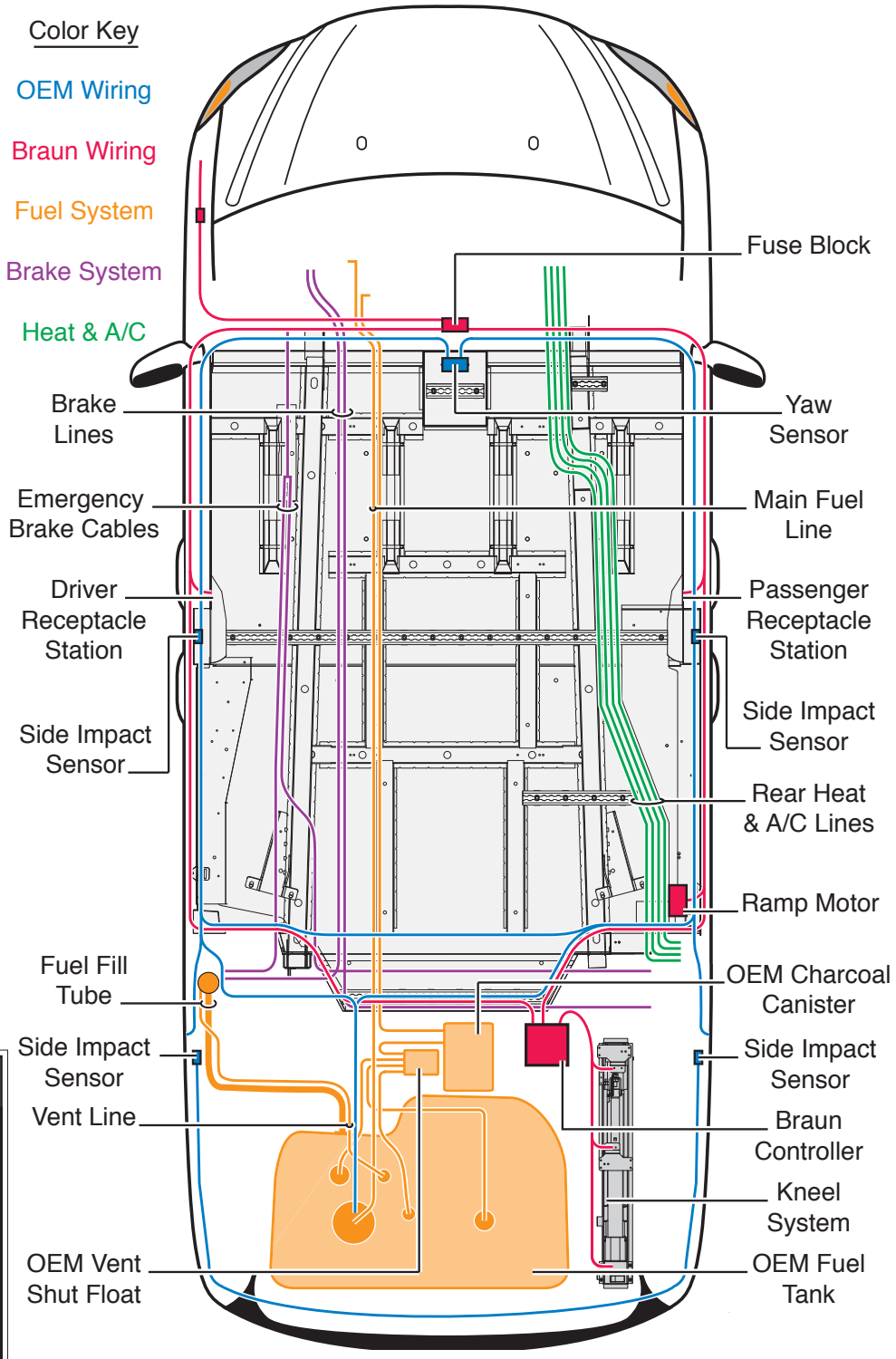
2010 Honda Lowered Floor Minivan Conversion - Below Floor Kneel Assembly

When installing an electrical tie-down, power seat or other auxiliary device, obstructions below the floor must be avoided. Obstructions include wiring, fuel system, brake lines, etc. Installers must be aware of these obstructions.

Refer to this illustration when installing aftermarket equipment to avoid contacting or damaging vital components under the floor.

Drilling or cutting into such obstructions may result in potential hazards as well as property damage.

Note: Some wiring harnesses shown may not be present. Avoid all harness locations.



Below Floor Kneel Assembly

⚠WARNING

Check for obstructions such as wires, gas lines, exhaust, etc. before drilling or cutting through floor. Failure to do so may result in serious bodily injury and/or property damage.

2010 Honda Lowered Floor Minivan Conversion - Above Floor Kneel Assembly

When installing an electrical tie-down, power seat or other auxiliary device, obstructions below the floor must be avoided. Obstructions include wiring, fuel system, brake lines, etc. Installers must be aware of these obstructions.

Refer to this illustration when installing aftermarket equipment to avoid contacting or damaging vital components under the floor.

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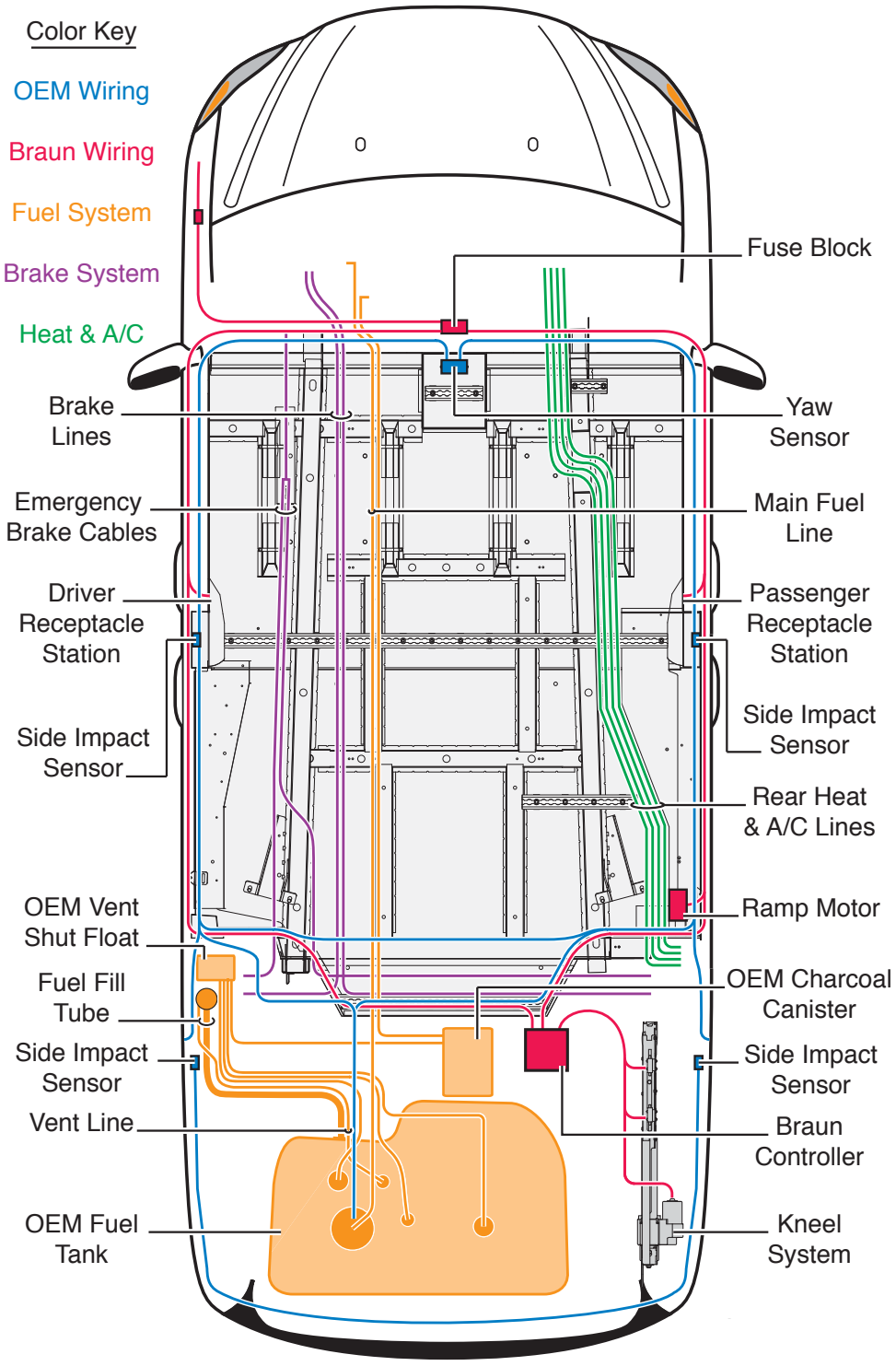


Above Floor Kneel Assembly

⚠WARNING

Check for obstructions such as wires, gas lines, exhaust, etc. before drilling or cutting through floor. Failure to do so may result in serious bodily injury and/or property damage.

AUXILIARY POWER SUPPLY

⚠CAUTION

Do not connect auxiliary devices to vehicle battery. Doing so may result in damage to electrical system and/or electronic components.

Auxiliary Power Supply: Do not connect auxiliary devices directly to the vehicle battery. Doing so may result in damage to electrical system and/or electronic components.

Two fuse blocks are provided as an auxiliary power source for dealer-installed auxiliary electrical device(s). Fuse block details and specifications are provided below. The fuse blocks are located in the bottom of the center dash console.

Below Floor Obstructions: When installing aftermarket equipment, obstructions below the floor must be avoided. Obstructions include wiring, fuel system, brake lines, etc. Installers must be aware of these obstructions.

Refer to the illustrations on pages 14 and 15 to avoid contacting or damaging vital components under the floor.

⚠WARNING

Risk of electrical fire! Install and electrically terminate auxiliary electrical device as specified by device manufacturer.

Fuse Block Assembly: Two fuse blocks are provided for use as an auxiliary power source (one Ignition fuse block and one Battery fuse block).

The Battery fuse block provides power at all times (independent of the vehicle ignition). The Ignition fuse block supplies power only when the vehicle ignition is on.

The installer is responsible for supplying the correct gauge wire and fuse for the particular device to be attached to the fuse block (as specified by the manufacturer of the device).

Ignition Fuse Block: The total maximum load must not exceed 30 amperes.

Battery Fuse Block: The total maximum load must not exceed 40 amperes per fuse.

Note: If installing an auxiliary electrical device that requires more than a 40 ampere power source, an alternative power source must be provided.

Fuse Block Access: The fuse blocks are located at the bottom of the center console. Accessing the fuse block assembly requires removal of driver and passenger heater lower covers. The dashboard center lower cover is then removed (two fasteners concealed by beverage holder). OEM panel removal/installation procedures have not been altered by conversion process.

Note: The fuse blocks are part of an electrical assembly. Two ground studs are also provided.

Under Dash Fuse Blocks

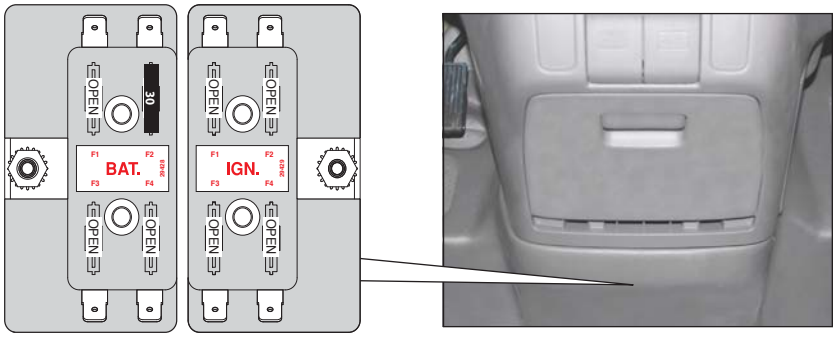


Diagram - Electronic Control Module Connections / Inputs / Indicators

The control module assembly is mounted to the bottom of the passenger side third row seat. Removal of this seat is prohibited. Tip the seat forward to access the module assembly.

Computer Port - Laptop diagnostic connection port to the electronic controller.

Grounding Studs - The controller assembly provides two grounding studs.

Indicator LEDs - LED's illuminate whenever a switch is grounded (as labeled).

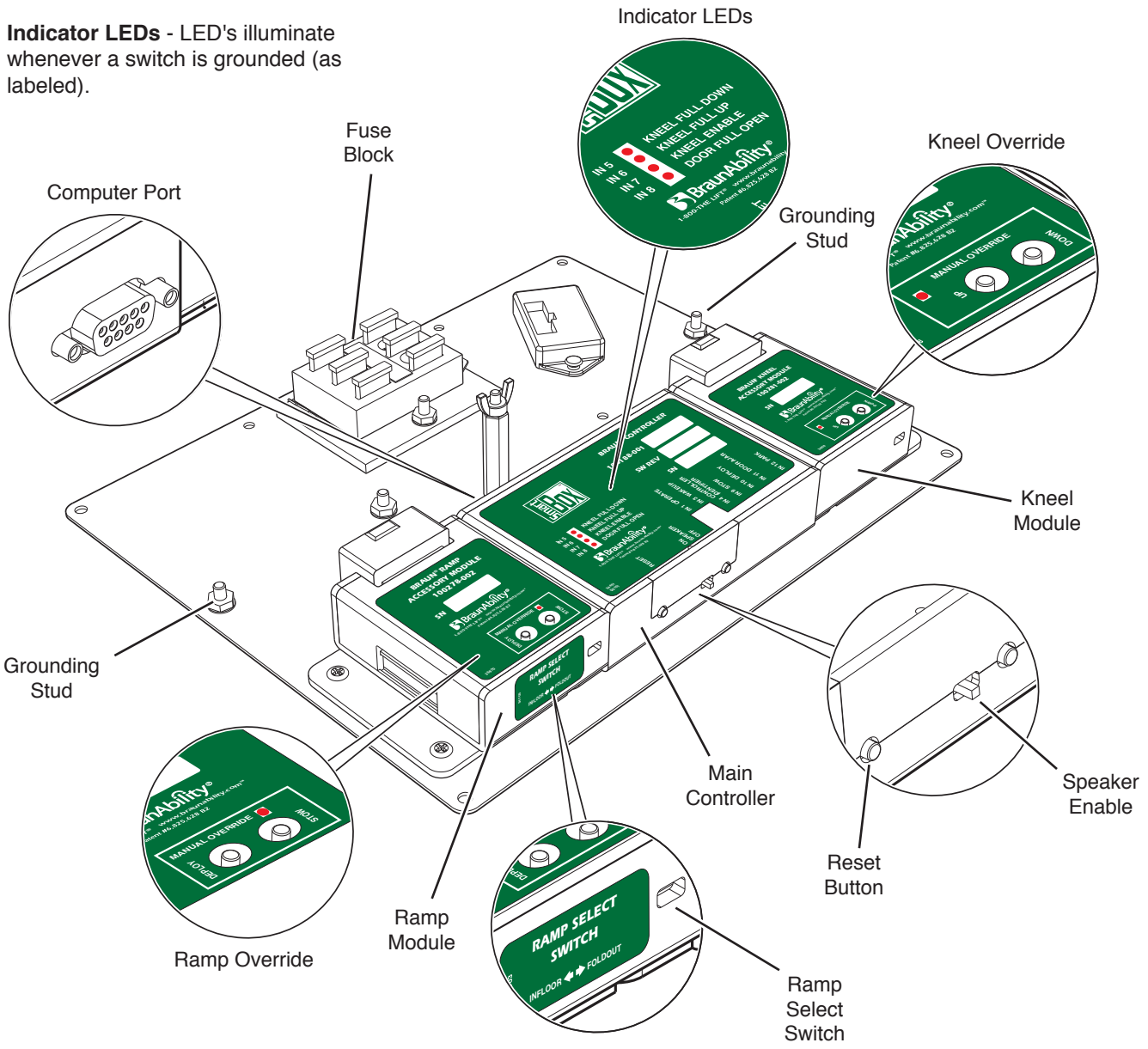
Kneel Override - Buttons drive the kneel system in the direction indicated. The kneel LED will illuminate Red when kneeling and Green when unkneeling (raising).

Reset Button - Resets controller.

Speaker Enable - Turns the internal speaker On and Off. The speaker sounds a tone whenever an operate signal is seen (any control switch is activated). A tone will also sound if the ramp motor pulls current over the controller preset baseline current.

Ramp Select Switch - Sets controller functions to an infloor or foldout ramp.

Ramp Override - Buttons drive the ramp in the direction indicated. The ramp LED will illuminate Red when deploying and Green when stowing.



BLANK for LAYOUT

2010 Honda Conversion - Switch and Component Location Diagram

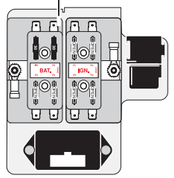
Passenger Dash Switch

For front seat passengers, a switch is located to the right of the center console (dashboard).

Press and hold switch displaying slide door graphic.

Center Console Fuse Block

Fuse Block



B-Pillar Switch

A switch is located on the wall panel ahead of the passenger slide door (B-Pillar).

Press and hold switch displaying slide door graphic.

Ramp

C-Pillar Switch

A switch is located on the wall panel rear of the passenger slide door (C-Pillar).

Press and hold switch displaying slide door graphic.

Kneel Override Switch

The kneel override switch is located rear of the ramp in the lower wall panel (bottom switch).

Press and hold this switch to release kneel (raise vehicle).

Sliding Door Main Switch

Slide switch to OFF to disable control switches.

Slide switch to ON to enable control switches.

Slide switch to ON position to enable power functions. **ON**

Ramp Override Switch

The ramp override switch is located rear of the ramp in the lower wall panel (top switch).

Release the switch when the ramp is fully stowed (stops).

Driver Dash Switch

Press and hold switch displaying slide door graphic.

Press and hold switch displaying slide door graphic.

Kneel On/Off Switch

Press switch to ON position to enable kneel system. **ON**

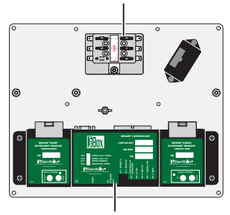
Press switch to OFF position to disable kneel system. **OFF**

Keyless Entry

Press and hold until LED blinks & applicable function begins.

Rear Fuse Block

Battery Power Rear Fuse Block

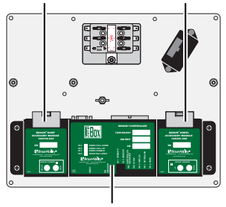


Controller Assembly

Controller Assembly

Ramp Module

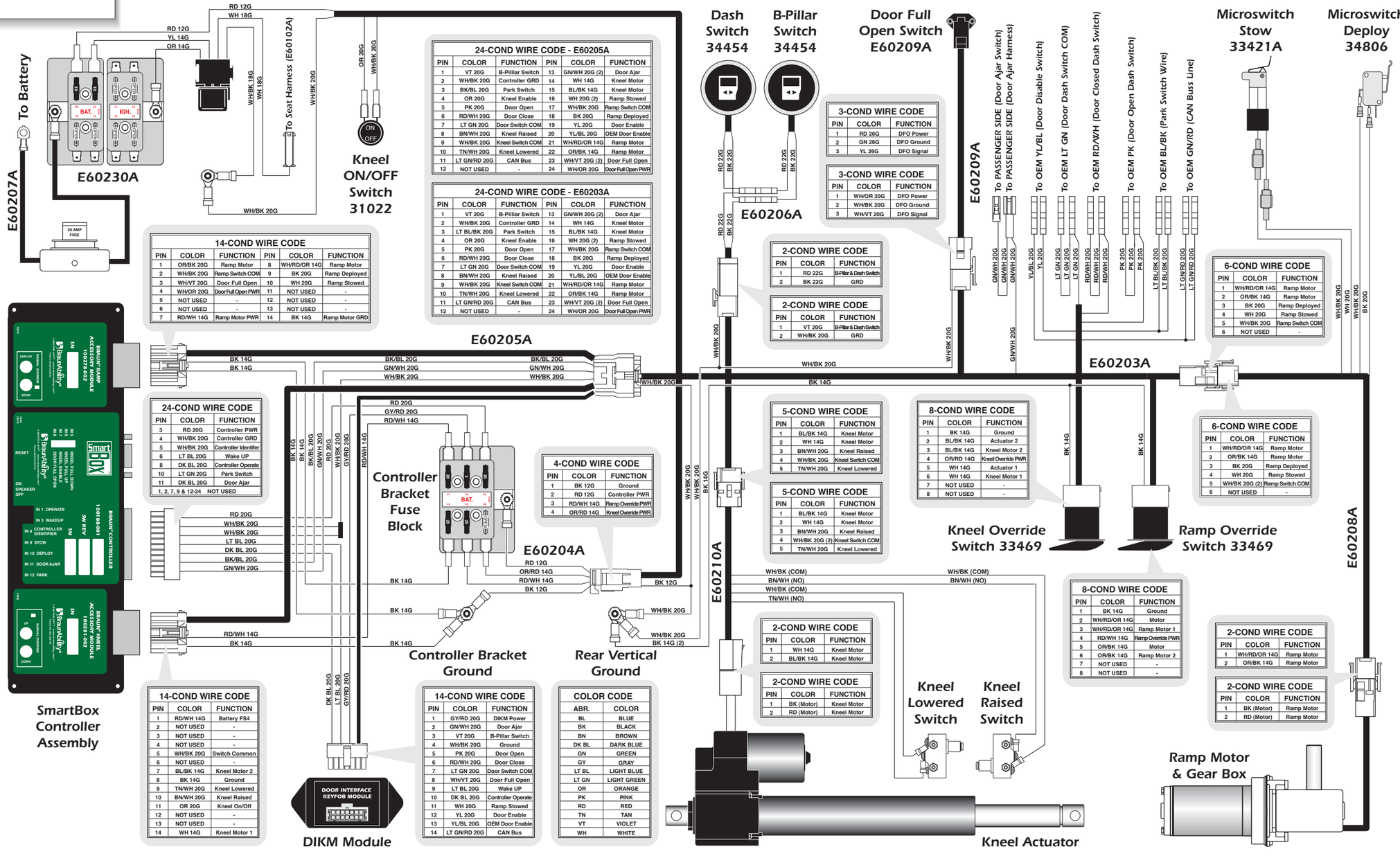
Kneel Module



SmartBox Controller

Unfold for:
Switch & Component
Location Diagram

Wiring Diagram - 2010 Honda Conversion - Power Door, Foldout Ramp & Below Floor Kneel System



24-COND WIRE CODE - E60205A

PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	VT 20G	B-Pillar Switch	13	GN/WH 20G (2)	Door Ajar
2	WH/BK 20G	Controller GRD	14	WH 14G	Kneel Motor
3	BK/BL 20G	Park Switch	15	BL/BK 14G	Kneel Motor
4	OR 20G	Kneel Enable	16	WH 20G (2)	Ramp Stowed
5	PK 20G	Door Open	17	WH/BK 20G	Ramp Switch COM
6	RD/WH 20G	Door Close	18	BK 20G	Ramp Deployed
7	LT GN 20G	Door Switch COM	19	YL 20G	Door Enable
8	BN/WH 20G	Kneel Raised	20	YL/BL 20G	OEM Door Enable
9	WH/BK 20G	Kneel Switch COM	21	WH/RD/OR 14G	Ramp Motor
10	TN/WH 20G	Kneel Lowered	22	OR/BK 14G	Ramp Motor
11	LT GN/RD 20G	CAN Bus	23	WH/VT 20G (2)	Door Full Open
12	NOT USED	-	24	WH/OR 20G	Door Full Open PWR

24-COND WIRE CODE - E60203A

PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	VT 20G	B-Pillar Switch	13	GN/WH 20G (2)	Door Ajar
2	WH/BK 20G	Controller GRD	14	WH 14G	Kneel Motor
3	LT BL/BK 20G	Park Switch	15	BL/BK 14G	Kneel Motor
4	OR 20G	Kneel Enable	16	WH 20G (2)	Ramp Stowed
5	PK 20G	Door Open	17	WH/BK 20G	Ramp Switch COM
6	RD/WH 20G	Door Close	18	BK 20G	Ramp Deployed
7	LT GN 20G	Door Switch COM	19	YL 20G	Door Enable
8	BN/WH 20G	Kneel Raised	20	YL/BL 20G	OEM Door Enable
9	WH/BK 20G	Kneel Switch COM	21	WH/RD/OR 14G	Ramp Motor
10	TN/WH 20G	Kneel Lowered	22	OR/BK 14G	Ramp Motor
11	LT GN/RD 20G	CAN Bus	23	WH/VT 20G (2)	Door Full Open
12	NOT USED	-	24	WH/OR 20G	Door Full Open PWR

14-COND WIRE CODE

PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	OR/BK 20G	Ramp Motor	8	WH/RD/OR 14G	Ramp Motor
2	WH/BK 20G	Ramp Switch COM	9	BK 20G	Ramp Deployed
3	WH/VT 20G	Door Full Open	10	WH 20G	Ramp Stowed
4	WH/OR 20G	Door Full Open PWR	11	NOT USED	-
5	NOT USED	-	12	NOT USED	-
6	NOT USED	-	13	NOT USED	-
7	RD/WH 14G	Ramp Motor PWR	14	BK 14G	Ramp Motor GRD

3-COND WIRE CODE

PIN	COLOR	FUNCTION
1	RD 26G	DFO Power
2	GN 26G	DFO Ground
3	YL 26G	DFO Signal

3-COND WIRE CODE

PIN	COLOR	FUNCTION
1	WH/OR 20G	DFO Power
2	WH/BK 20G	DFO Ground
3	WH/VT 20G	DFO Signal

2-COND WIRE CODE

PIN	COLOR	FUNCTION
1	RD 22G	B-Pillar & Dash Switch
2	BK 22G	GRD

2-COND WIRE CODE

PIN	COLOR	FUNCTION
1	VT 20G	B-Pillar & Dash Switch
2	WH/BK 20G	GRD

6-COND WIRE CODE

PIN	COLOR	FUNCTION
1	WH/RD/OR 14G	Ramp Motor
2	OR/BK 14G	Ramp Motor
3	BK 20G	Ramp Deployed
4	WH 20G	Ramp Stowed
5	WH/BK 20G	Ramp Switch COM
6	NOT USED	-

6-COND WIRE CODE

PIN	COLOR	FUNCTION
1	WH/RD/OR 14G	Ramp Motor
2	OR/BK 14G	Ramp Motor
3	BK 20G	Ramp Deployed
4	WH 20G	Ramp Stowed
5	WH/BK 20G (2)	Ramp Switch COM
6	NOT USED	-

24-COND WIRE CODE

PIN	COLOR	FUNCTION
3	RD 20G	Controller PWR
4	WH/BK 20G	Controller GRD
5	WH/BK 20G	Controller Identifier
6	LT BL 20G	Wake UP
8	DK BL 20G	Controller Operate
10	LT GN 20G	Park Switch
11	DK BL 20G	Door Ajar
1, 2, 7, 9 & 12-24	NOT USED	

4-COND WIRE CODE

PIN	COLOR	FUNCTION
1	BK 12G	Ground
2	RD 12G	Controller PWR
3	RD/WH 14G	Ramp Override PWR
4	OR/RD 14G	Kneel Override PWR

5-COND WIRE CODE

PIN	COLOR	FUNCTION
1	BL/BK 14G	Kneel Motor
2	WH 14G	Kneel Motor
3	BN/WH 20G	Kneel Raised
4	WH/BK 20G	Kneel Switch COM
5	TN/WH 20G	Kneel Lowered

5-COND WIRE CODE

PIN	COLOR	FUNCTION
1	BL/BK 14G	Kneel Motor
2	WH 14G	Kneel Motor
3	BN/WH 20G	Kneel Raised
4	WH/BK 20G (2)	Kneel Switch COM
5	TN/WH 20G	Kneel Lowered

8-COND WIRE CODE

PIN	COLOR	FUNCTION
1	BK 14G	Ground
2	BL/BK 14G	Actuator 2
3	BL/BK 14G	Kneel Motor 2
4	OR/RD 14G	Kneel Override PWR
5	WH 14G	Actuator 1
6	WH 14G	Kneel Motor 1
7	NOT USED	-
8	NOT USED	-

8-COND WIRE CODE

PIN	COLOR	FUNCTION
1	BK 14G	Ground
2	WH/RD/OR 14G	Motor
3	WH/RD/OR 14G	Ramp Motor 1
4	RD/WH 14G	Ramp Override PWR
5	OR/BK 14G	Motor
6	OR/BK 14G	Ramp Motor 2
7	NOT USED	-
8	NOT USED	-

2-COND WIRE CODE

PIN	COLOR	FUNCTION
1	WH 14G	Kneel Motor
2	BL/BK 14G	Kneel Motor

2-COND WIRE CODE

PIN	COLOR	FUNCTION
1	BK (Motor)	Kneel Motor
2	RD (Motor)	Kneel Motor

2-COND WIRE CODE

PIN	COLOR	FUNCTION
1	WH/RD/OR 14G	Ramp Motor
2	OR/BK 14G	Ramp Motor

2-COND WIRE CODE

PIN	COLOR	FUNCTION
1	BK (Motor)	Ramp Motor
2	RD (Motor)	Ramp Motor

14-COND WIRE CODE

PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	RD/WH 14G	Battery FS4	8	BK 14G	Ground
2	NOT USED	-	9	TN/WH 20G	Kneel Lowered
3	NOT USED	-	10	BN/WH 20G	Kneel Raised
4	NOT USED	-	11	OR 20G	Kneel On/Off
5	WH/BK 20G	Switch Common	12	NOT USED	-
6	NOT USED	-	13	NOT USED	-
7	BL/BK 14G	Kneel Motor 2	14	WH 14G	Kneel Motor 1

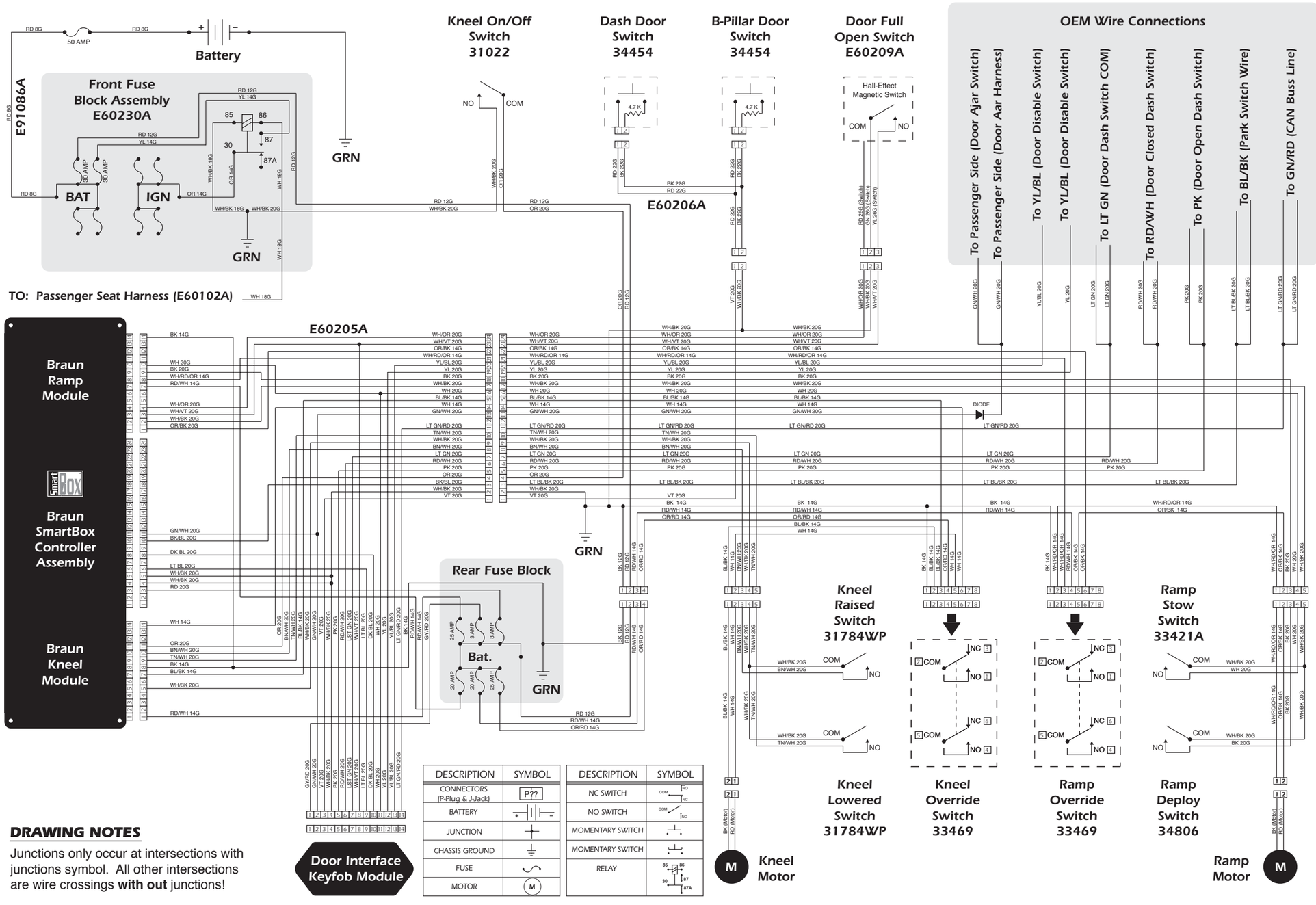
14-COND WIRE CODE

PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	GY/RD 20G	DIKM Power	8	WH/VT 20G	Door Full Open
2	GN/WH 20G	Door Ajar	9	LT BL 20G	Wake UP
3	VT 20G	B-Pillar Switch	10	DK BL 20G	Controller Operate
4	WH/BK 20G	Ground	11	WH 20G	Ramp Stowed
5	PK 20G	Door Open	12	YL 20G	Door Enable
6	RD/WH 20G	Door Close	13	YL/BL 20G	OEM Door Enable
7	LT GN 20G	Door Switch COM	14	LT GN/RD 20G	CAN Bus

COLOR CODE

ABR.	COLOR
BL	BLUE
BK	BLACK
BN	BROWN
DK BL	DARK BLUE
GN	GREEN
GY	GRAY
LT BL	LIGHT BLUE
LT GN	LIGHT GREEN
OR	ORANGE
PK	PINK
RD	RED
TN	TAN
VT	VIOLET
WH	WHITE

Electrical Schematic - 2010 Honda Conversion - Power Door, Foldout Ramp & Below Floor Kneel System

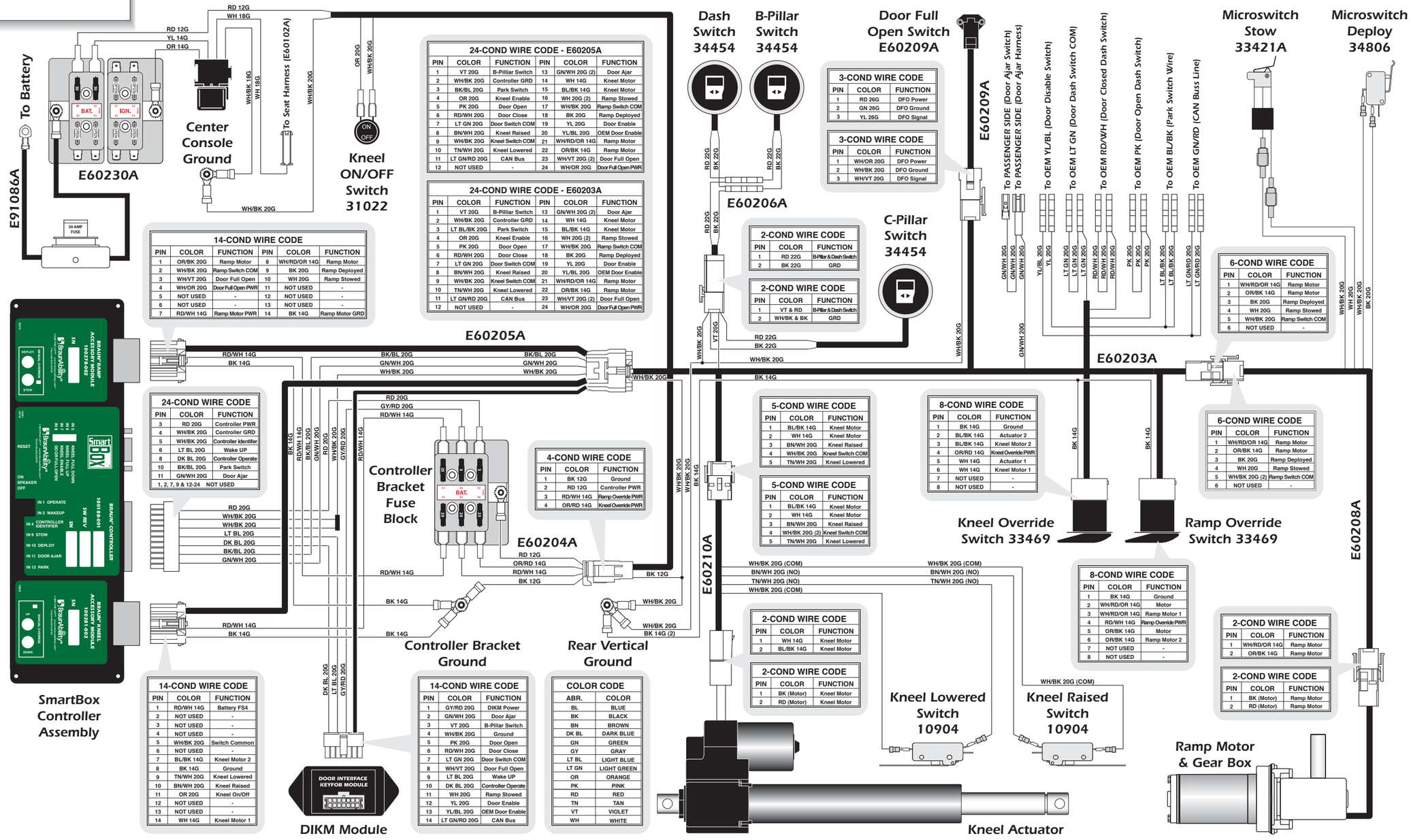


DRAWING NOTES

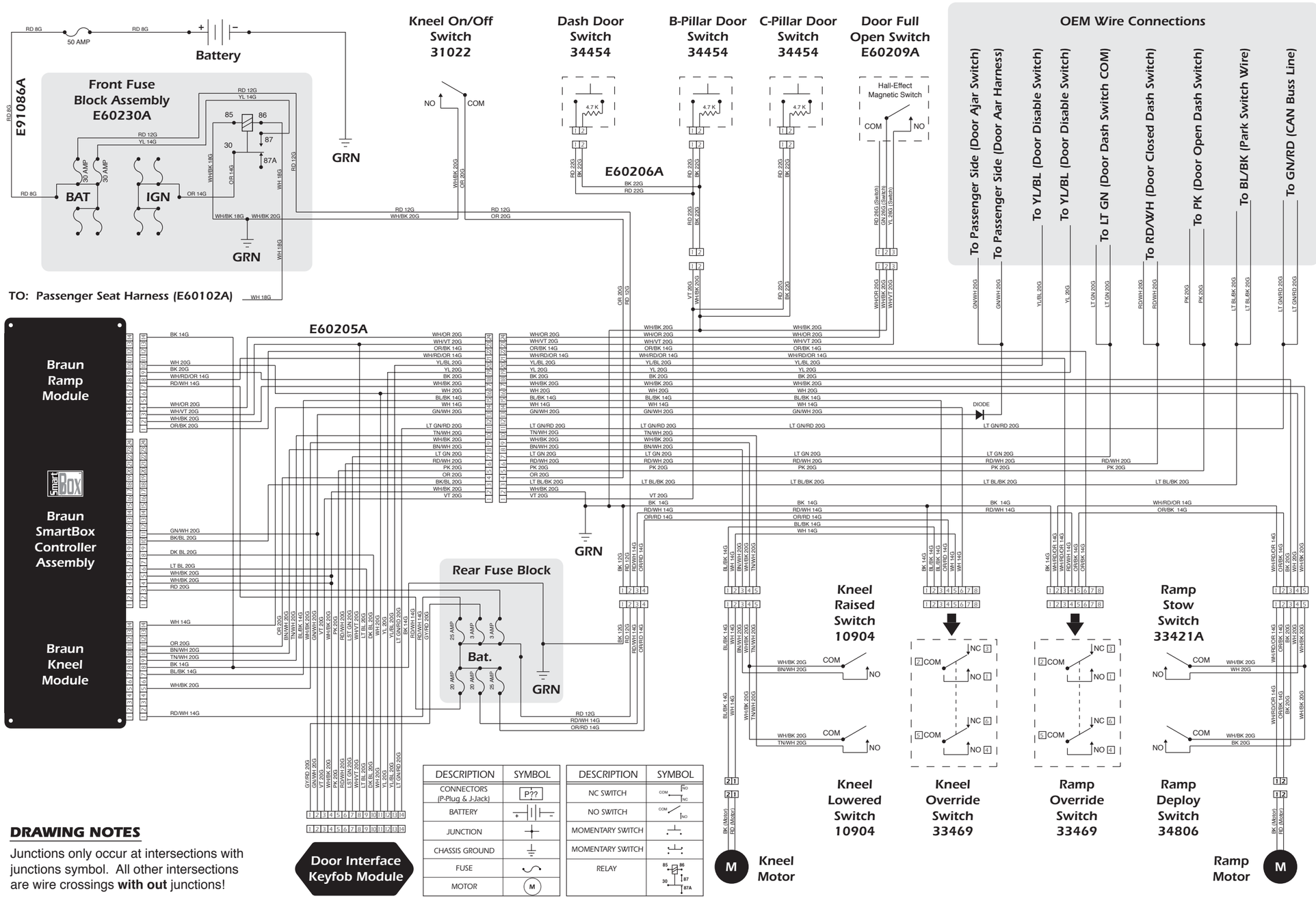
Junctions only occur at intersections with junctions symbol. All other intersections are wire crossings **with out** junctions!

Unfold for:
Electrical Schematic
Power Door, Foldout
Ramp & Below Floor Kneel

Wiring Diagram - 2010 Honda Conversion - Power Door, Foldout Ramp & Above Floor Kneel System [redacted]



Electrical Schematic - 2010 Honda Conversion - Power Door, Foldout Ramp & Above Floor Kneel System



DESCRIPTION	SYMBOL
CONNECTORS (P-Plug & J-Jack)	P??
BATTERY	
JUNCTION	
CHASSIS GROUND	
FUSE	
MOTOR	M

DESCRIPTION	SYMBOL
NC SWITCH	COM NC NO
NO SWITCH	COM NO
MOMENTARY SWITCH	
MOMENTARY SWITCH	
RELAY	85 86 30 87 87A

DRAWING NOTES

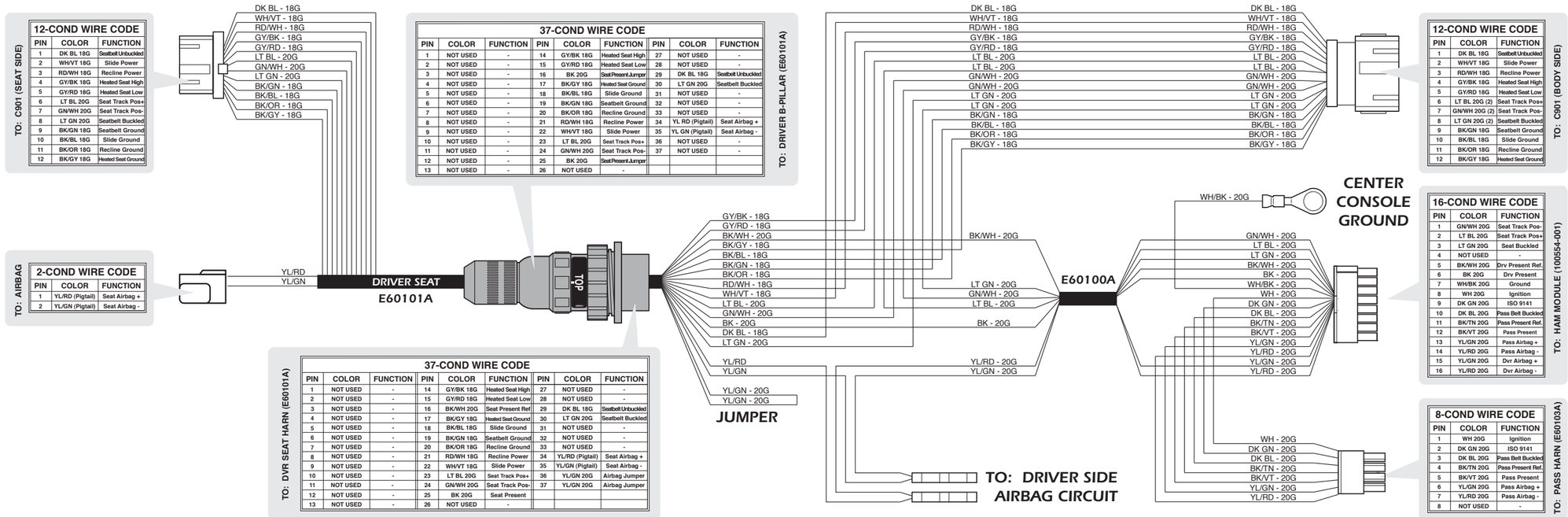
Junctions only occur at intersections with junctions symbol. All other intersections are wire crossings **with out** junctions!

Unfold for:
Electrical Schmatic
Power Door, Foldout
Ramp & Above Floor Kneel

Wiring Diagram - 2010 Honda Conversion - Front Driver Seat Electrical Systems

DRAWING NOTES

Junctions only occur at intersections with junction symbols (✦).
All other intersections are wire crossings **without** junctions!



DRAWING NOTES

Junctions only occur at intersections with junction symbols (✦).
All other intersections are wire crossings **without** junctions!

TO: C931 (SEAT SIDE)

13-COND WIRE CODE		
PIN	COLOR	FUNCTION
1	WH/BK 18G	Recline Power
2	NOT USED	-
3	BK/BL 20G	SRS Ground
4	YL/GN 20G	Seat Heat High
5	DK GN 20G	ISO9141 Buss Line
6	DK BL 20G	Seatbelt Buckled
7	BK 18G	Seat Motor Ground
8	BK 18G	Seat Heat Ground
9	NOT USED	-
10	YL 20G	Seat Heat Low
11	WH 20G	Ignition
12	LT BL 20G	Seatbelt Unbuckled
13	WH/LT GN 18G	Slide Power

WH/BK - 18G
BK/BL - 20G
YL/GN - 20G
DK GN - 20G
DK BL - 20G
BK - 18G
BK - 18G
YL - 20G
WH - 20G
LT BL - 20G
WH/LT GN - 18G

TO: PASS B-PILLAR (E60102A)

37-COND WIRE CODE								
PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	NOT USED	-	14	YL/GN 20G	Seat Heat High	27	NOT USED	-
2	RD 18G	Sub Woofer +	15	YL 20G	Seat Heat Low	28	NOT USED	-
3	NOT USED	-	16	BK 20G	Seat Present Ref	29	NOT USED	-
4	NOT USED	-	17	BK 18G	Seat Heat Ground	30	NOT USED	-
5	NOT USED	-	18	BK 18G	Seat Motor Ground	31	NOT USED	-
6	GN 18G	Sub Woofer -	19	BK/BL 20G	SRS Ground	32	DK BL 20G	Belt Buckled
7	NOT USED	-	20	NOT USED	-	33	LT BL 20G	Belt Unbuckled
8	NOT USED	-	21	WH/BK 18G	Recline Power	34	NOT USED	-
9	NOT USED	-	22	WH/LT GN 18G	Slide Power	35	NOT USED	-
10	NOT USED	-	23	NOT USED	-	36	YL RD (Pigtail)	Seat Airbag +
11	NOT USED	-	24	NOT USED	-	37	YL GN (Pigtail)	Seat Airbag -
12	DK GN 20G	ISO9141 Buss Line	25	NOT USED	-			
13	WH 20G	Ignition	26	BK 20G	Seat Present			

TO: AIRBAG

2-COND WIRE CODE		
PIN	COLOR	FUNCTION
1	YL/RD (Pigtail)	Seat Airbag +
2	YL/GN (Pigtail)	Seat Airbag -

YL/RD
YL/GN

TO: SUB WOOFER

2-COND WIRE CODE		
PIN	COLOR	FUNCTION
1	RD 18G	Sub Woofer +
2	GN 18G	Sub Woofer -

RD - 18G
GN - 18G

PASSENGER SEAT
E60103A

TOP

TO: PASS SEAT HARN (E60103A)

37-COND WIRE CODE								
PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION	PIN	COLOR	FUNCTION
1	NOT USED	-	14	YL/GN 20G	Seat Heat High	27	NOT USED	-
2	RD 18G	Sub Woofer +	15	YL 20G	Seat Heat Low	28	NOT USED	-
3	NOT USED	-	16	BK/TN 20G	Jumper	29	NOT USED	-
4	NOT USED	-	17	BK 18G	Seat Heat Ground	30	NOT USED	-
5	NOT USED	-	18	BK 18G	Seat Motor Ground	31	NOT USED	-
6	LT GN/GN 18G	Sub Woofer -	19	BK 18G	SRS Ground	32	DK BL 20G (2)	Belt Buckled
7	NOT USED	-	20	NOT USED	-	33	LT BL 20G	Belt Unbuckled
8	NOT USED	-	21	WH/BK 18G	Recline Power	34	YL/GN 20G	Airbag Jumper
9	NOT USED	-	22	WH/LT GN 18G	Slide Power	35	YL/GN 20G	Airbag Jumper
10	NOT USED	-	23	NOT USED	-	36	YL RD (Pigtail)	Seat Airbag +
11	NOT USED	-	24	NOT USED	-	37	YL GN (Pigtail)	Seat Airbag -
12	DK GN 20G (2)	ISO9141 Buss Line	25	NOT USED	-			
13	WH 20G (2)	Ignition	26	BK/VT 20G	Seat Present			

RD - 18G
LT GN/GN - 18G
DK GN - 20G
DK GN - 20G
WH - 20G
WH - 20G
YL/GN - 20G
YL - 20G
BK/TN - 20G
BK - 18G
BK - 18G
BK - 18G
WH/BK - 18G
WH/LT GN - 18G
BK/VT - 20G
DK BL - 20G
DK BL - 20G
LT BL - 20G

YL/GN - 20G
YL/GN - 20G **JUMPER**

YL/RD
YL/GN

RD - 18G
LT GN/GN - 18G
DK GN - 20G
DK GN - 20G
WH - 20G
WH - 20G
YL/GN - 20G
YL - 20G
BK/TN - 20G
BK - 18G
BK - 18G
BK - 18G
WH/BK - 18G
WH/LT GN - 18G
BK/VT - 20G
DK BL - 20G
DK BL - 20G
LT BL - 20G

YL/RD
YL/GN

RD - 18G
LT GN/GN - 18G

2-COND WIRE CODE		
PIN	COLOR	FUNCTION
1	RD 18G	Sub Woofer +
2	LTGN/GN 18G	Sub Woofer -

TO: SPEAKER CIRCUIT

BK - 18G
EVAP DRAIN GROUND

BK - 18G
BK - 18G
BK - 18G
BK - 18G
PASS B-PILLAR GROUND

WH - 20G
WH - 20G

1-COND WIRE CODE		
PIN	COLOR	FUNCTION
1	WH 20G	Ignition

TO: J1 OF FUSE BLOCK (E60213A)

WH - 20G
DK GN - 20G
DK BL - 20G
BK/TN - 20G
BK/VT - 20G
YL/GN - 20G
YL/RD - 20G

8-COND WIRE CODE		
PIN	COLOR	FUNCTION
1	WH 20G	Ignition
2	DK GN 20G	ISO9141 Buss Line
3	DK BL 20G	Belt Buckled
4	BK/TN 20G	Seat Present Ref
5	BK/VT 20G	Seat Present
6	YL/GN 20G	Seat Airbag -
7	YL/RD 20G	Seat Airbag +
8	NOT USED	-

TO: DRIVER HARN (BODY SIDE - E60100A)

YL/RD - 20G
YL/RD
YL/GN - 20G
YL/GN

TO: PASS SIDE AIRBAG CIRCUITS

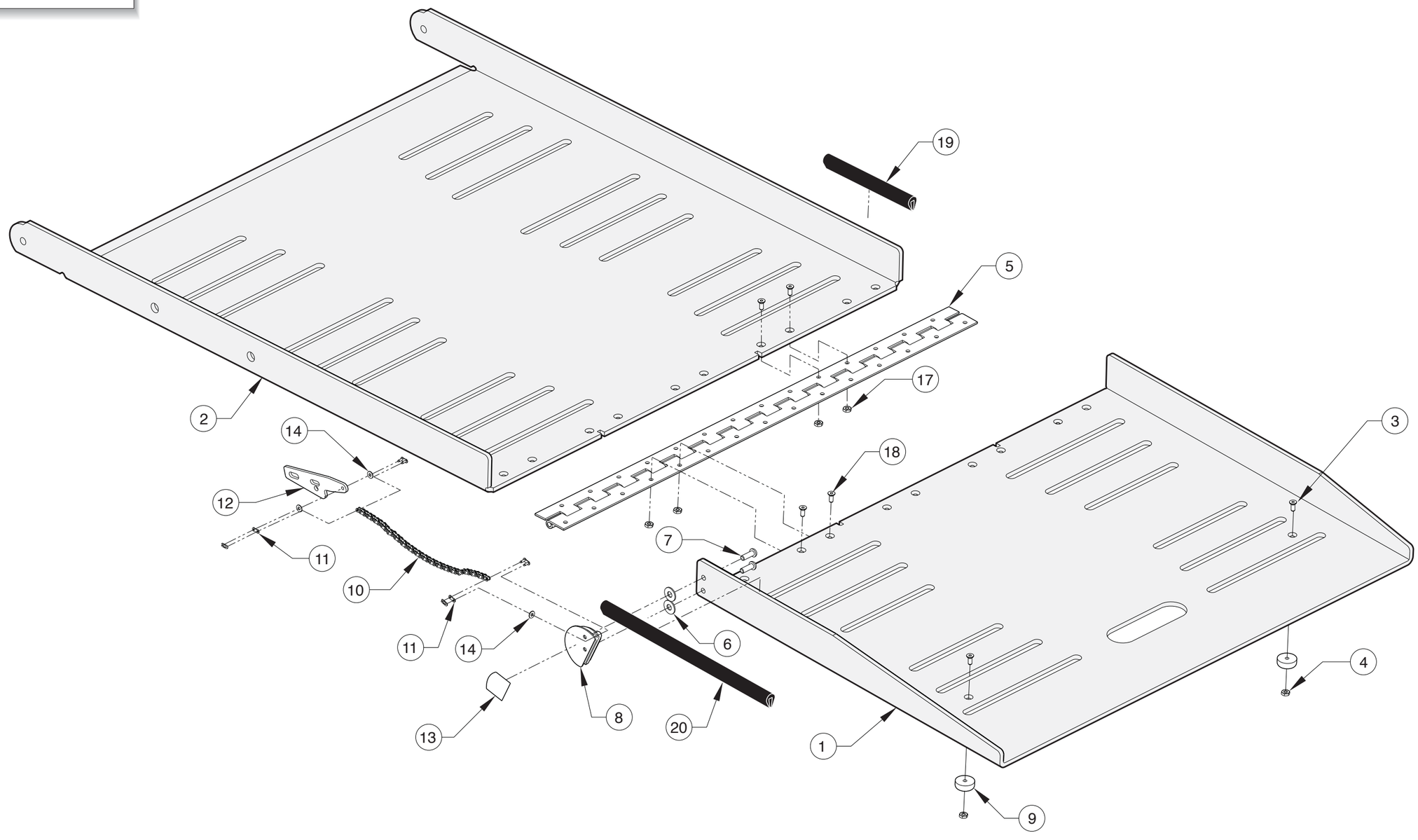
WH/BK - 18G
YL/GN - 20G
DK GN - 20G
DK BL - 20G
YL - 20G
WH - 20G
LT BL - 20G
WH/LT GN - 18G

13-COND WIRE CODE		
PIN	COLOR	FUNCTION
1	WH/BK 18G	Recline Power
2	NOT USED	-
3	NOT USED	-
4	YL/GN 20G	Seat Heat High
5	DK GN 20G	ISO9141 Buss Line
6	DK BL 20G	Belt Buckled
7	NOT USED	-
8	NOT USED	-
9	NOT USED	-
10	YL 20G	Seat Heat Low
11	WH 20G	Ignition
12	LT BL 20G	Belt Unbuckled
13	WH/LT GN 20G	Slide Power

TO: C931 (BODY SIDE)

Unfold for:
Wiring Diagram
Front Passenger
Seat Electrical Systems

Exploded View - 2010 Honda Conversion - Foldout Ramp Platform Assembly



2010 Honda Conversion - Foldout Ramp Platform Assembly

Item	Qty.	Description	Part Number
1	1	RAMP-EXTENSTION/28.75"/2009 HONDA	E60002??
2	1	RAMP-BASE/28.75" HONDA	E60003??
3	2	SCREW-#10-32X1/2 FHDHXS-AUTO BLK-W/PATCH	17192P
4	2	NUT-#10-32 W/LOCKWASHER/AUTO-BK	18349
5	1	HINGE WMT.-S.S. 2" X 1/4" X 28"	18619W028
6	2	WASHER-1/4" FLAT/AUTO-BK	10062
7	2	BOLT-1/4-20X3/4"BHCS NYLK/BKZN	25371
8	1	CAM-CAST RAMP	34317
9	2	BUMPER-RUBBER RECES.31/32 OD	10950
10	1	CHAIN-NICKEL PLATED #35 ROLLER X 9.38"	84314R009.38
11	2	LINK-CHAIN #35	12454
12	1	BRACKET-CABLE TENSIONER/OUTER/BLACK	52568-2908BK
13	1	DECAL-WARN CHAIN HAZ RAMP EVII	26134
14	3	#6 NYLON WASHER	82070-000
15 *	0.001	RITE-LOK-BLUE/#42 GEN PURPOSE	18822
16 *	1	SHRINK TUBING-1/2" X 7" LONG	14374R007
17	20	NUT-10-32 HEX CENTER LOCK/AUTO-BK	34290BK
18	20	SCREW-#10-32X5/8 FHSC-AUTO BLK/PATCHED	32954P
19	1	EDGE LINER-1/4"/EDGE TRIM/BLK X 6"	E42139R006
20	1	EDGE LINER-1/4"/EDGE TRIM/BLK X 12"	E42139R012

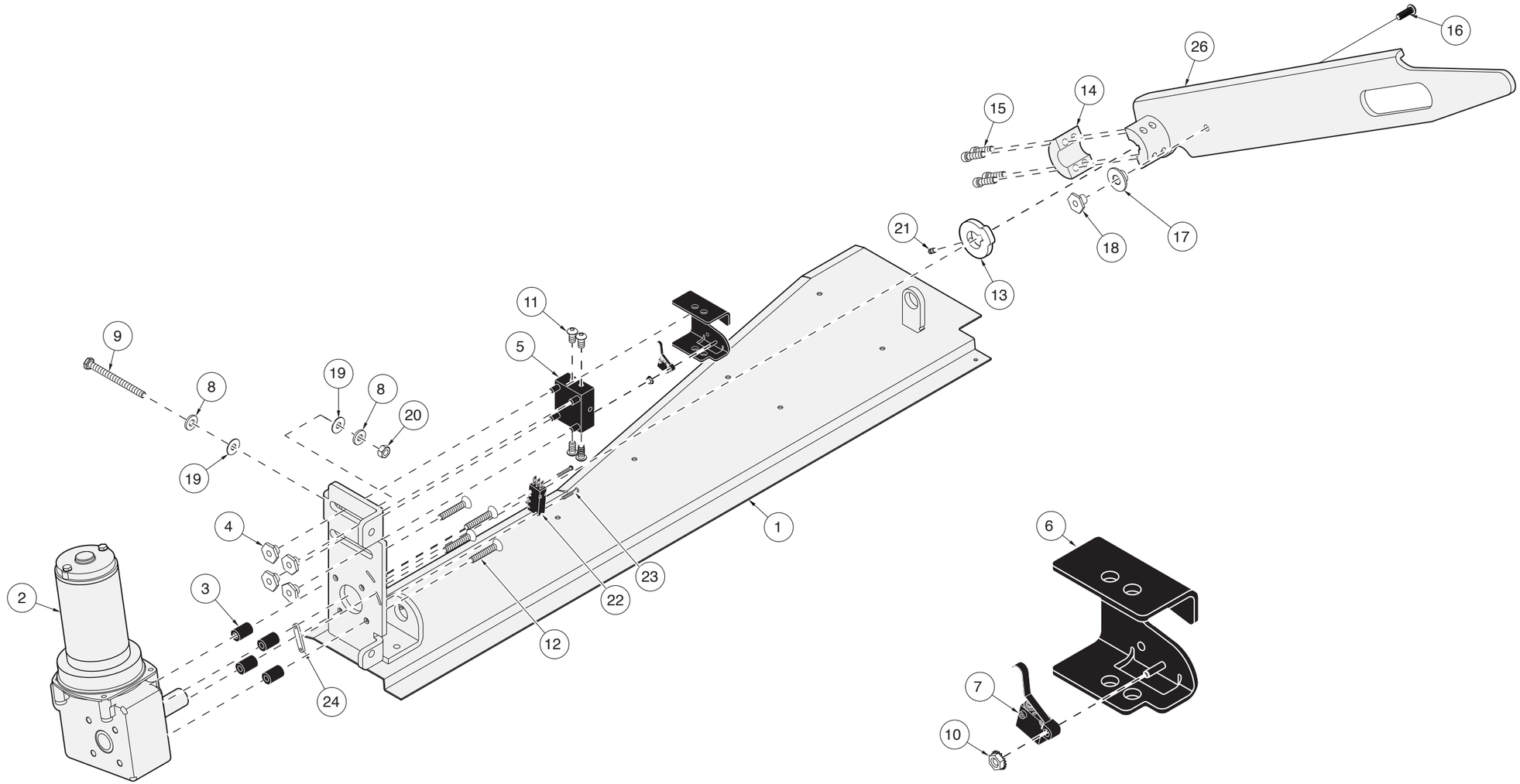
* Item not shown

2010 Honda Conversion - Foldout Ramp Gear, Motor and Base Assembly

Item	Qty.	Description	Part Number
1	1	WMT-MAIN RAMP HOUSING	E60004W??
2	1	GEARMOTOR ASSY-KLAUBER/RIGHT ANGLE	36087A
3	4	TUBING-1/4 X 1/2 X 3/4	10651R000.75
4	4	NUT-SHOULDER 3/4" HEX/0.27 H	32385
5	1	STOW SWITCH SLIDER	E40481
6	1	SUPPORT-GEAR MOTOR/FOLDING RAMP/08RT	E51179BK
7	1	ASSEMBLY-FOLDING RAMP STOW SWITCH	33421A
8	2	WASHER-1/4" FLAT/AUTO-BK	10062
9	1	BOLT-1/4-20 X 3" TAP / ZINC PLATED	23976ZP
10	1	NUT-#4-40 w/LOCKWASHER/AUTO-BK	19537
11	4	BOLT-1/4-20 X 1/2 BUT HD SOC/AUTO-BK	15733
12	4	SCREW-1/4-20 X 1 1/2" FHSCS	29669
13	1	CAM-MICRO-SWITCH ADJUST-EV	52573-2905
14	1	COLLAR-SPLIT-3/4" SHAFT/RMP MTR/INNER/BK	52565-2905BK
15	4	SCREW-1/4-20 X 1" SOC HD CAP	24221
16	1	BOLT-1/4-20X3/4"BHCS NYLK/BKZN	25371
17	1	PIN-RAMP SUPPORT-96SC 29" RAMP	51815-2905
18	1	LATCH BOLT-SUPPORT-29" RAMP	51541-2905
19	2	WASHER-NYLON 1/4IDX11/16X.030	12690
20	1	NUT-1/4-20 HEX LOCK/AUTO-BK	10775
21	1	SCREW-#10-32 X 5/16" SET/AUTO-BK	11562
22	1	MICRO SWITCH-EATON-FLR LVL/CUPPED	34806
23	2	SCREW-#4-40 X 3/4" RD. HD./AUTO-BK	11483
24	1	PLATE-TAPPED #4-40 MICRO SWITCH	24998
25 *	0.001	RITE-LOK-BLUE/#42 GEN PURPOSE	18822
26	1	WMT-ARM-DRIVES RAMP-GEAR MTR	E40268W-07BK

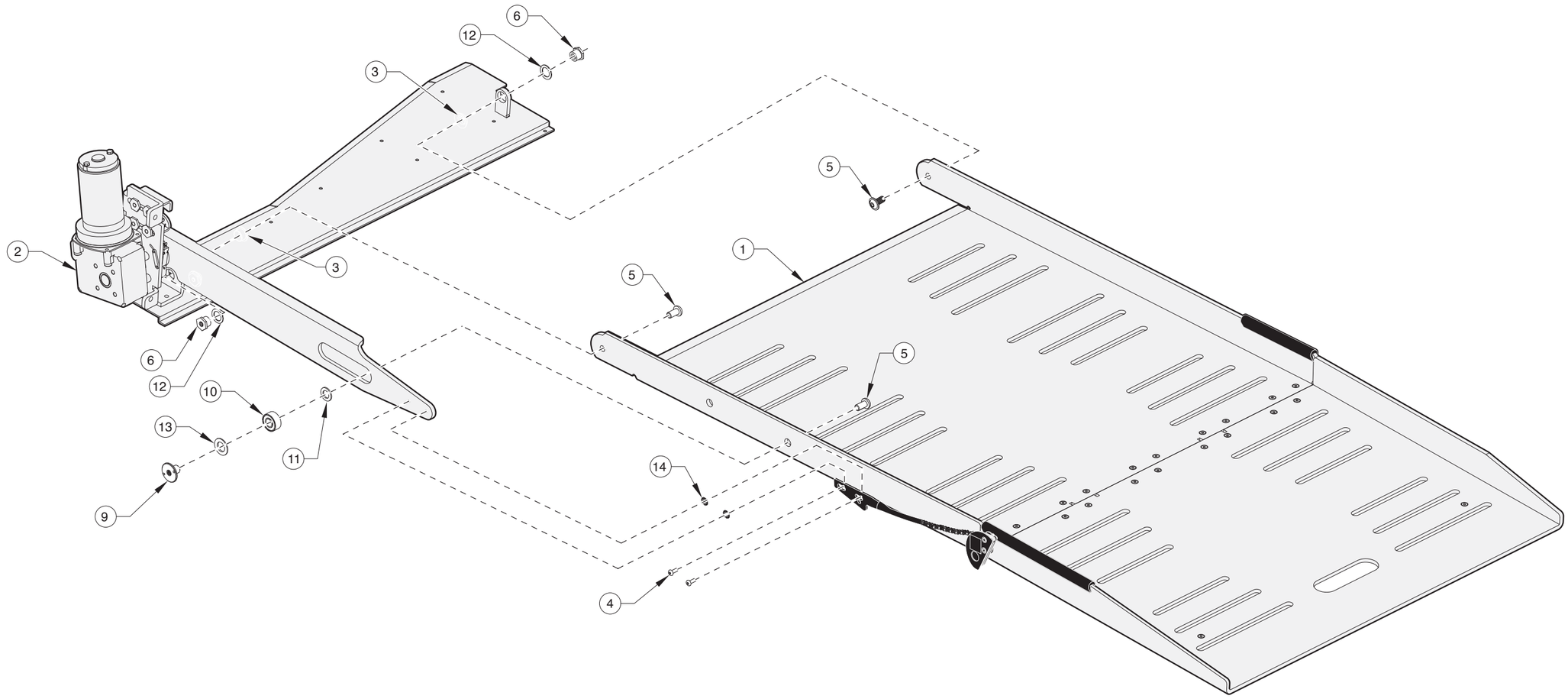
* Item not shown

Exploded View - 2010 Honda Conversion - Foldout Ramp Gear, Motor and Base Assembly



Unfold for:
Exploded View
Foldout Ramp Gear,
Motor and Base Assembly

Exploded View - 2010 Honda Conversion - Foldout Ramp Assembly



2010 Honda Conversion - Foldout Ramp Assembly

Item	Qty.	Description	Part Number
1	1	RAMP ASSY-BASE & EXT/28.75" AUTO/2010	E60003??A2810
2	1	ASSY-MAIN RAMP HOUSING	E60004A??
3	2	BEARING-FLANGE-5/8" X 1/4"-10FDU04	28435
4	2	SCREW-1/4-20 X 3/8" FLBHSCS-	28252
5	3	BOLT-3/8-16 X 3/4" FLBHSCS-GD8	25171
6	2	PIVOT PIN/BUSHING/EV RAMP/2905	52571-2905
7*	1	HARN - RIGHT ANGLE RAMP MOTOR	E60208A
8*	0.001	RITE-LOK-BLUE/#42 GEN PURPOSE	18822
9	1	RETAINER-BEARING	21451-03
10	1	BEARING-1/2ID X 1 1/8 OD-BALL	21371
11	1	WASHER-.519ID X .876OD X .074	12621
12	2	WASHER-.63 X .8 X .06 NYLON{10	83584
13	1	WASHER-UHMW 1.500 OD X .76 ID X 0.062	29680
14	2	WASHER-1/4 EXT STAR TOOTH LOCK ZP	83588

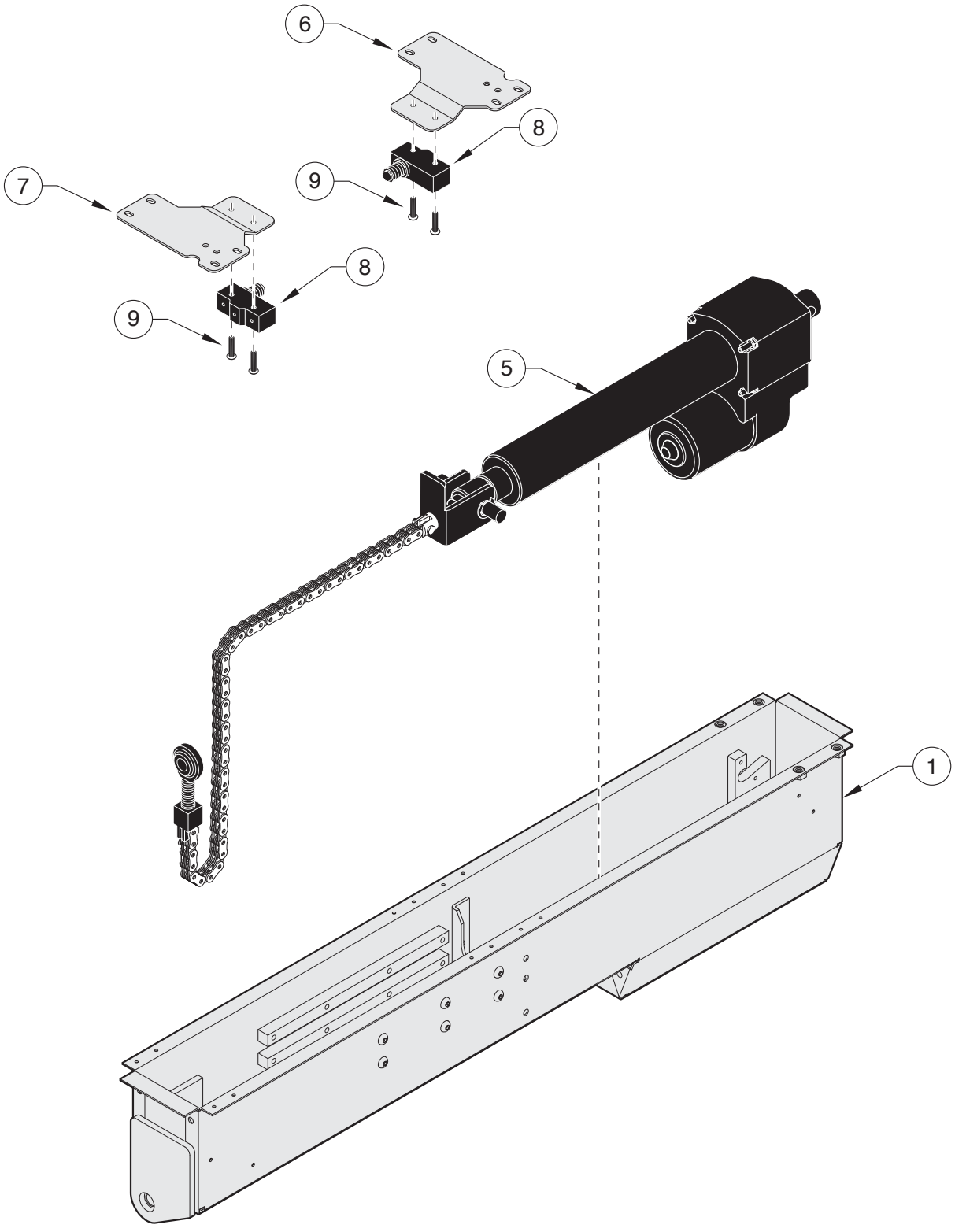
* Item not shown

2010 Honda Conversion - Below Floor Kneel Assembly

Item	Qty.	Description	Part Number
1	1	ASSY-KNEEL BOX-HONDA	E60074A
2 *	1	KNEEL SWITCH BRACKET	E50859BK
3 *	1	HARN-KNEEL SWITCHES	E60210A
4 *	1	SWITCH-ON/OFF ROCKER-KNEEL	31022
5	1	ASSY-ACT/K2xG20-12V-08/2000#/8"STROKE	E60216A
6	1	BKT-KNEEL-FULL OUT DVR	E50888D
7	1	BKT-KNEEL-FULL OUT PASS	E50888P
8	2	SWITCH-LIMIT/PLUNGER STYLE/WEATHER-PROOF	31784WP
9	4	SCREW-#8-32 X 1"-MCH TRUSS HD/AUTO-BK	19912BK

Item not shown

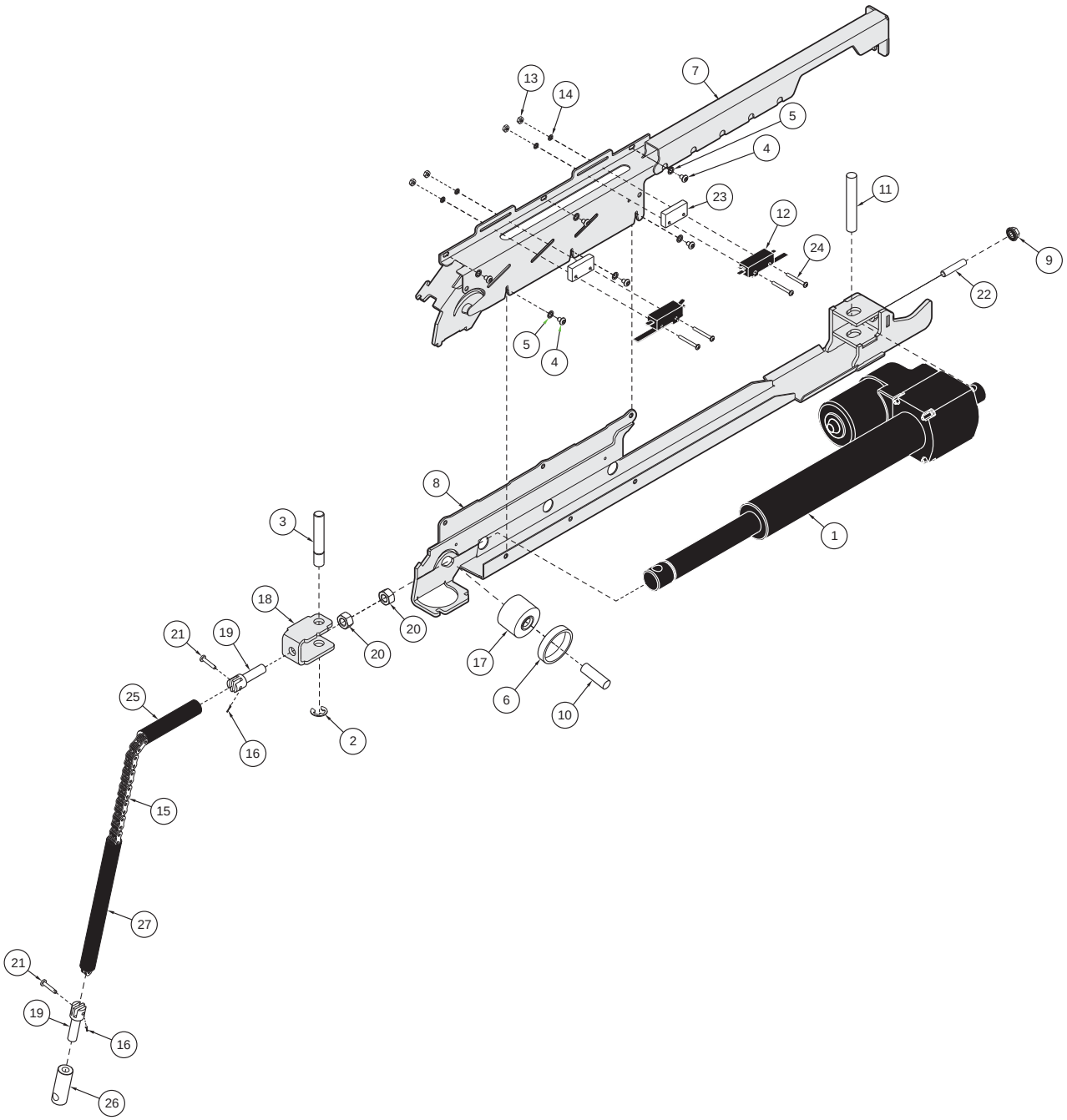
Exploded View - 2010 Honda Conversion - Below Floor Kneel Assembly



2010 Honda Conversion - Above Floor Kneel Assembly

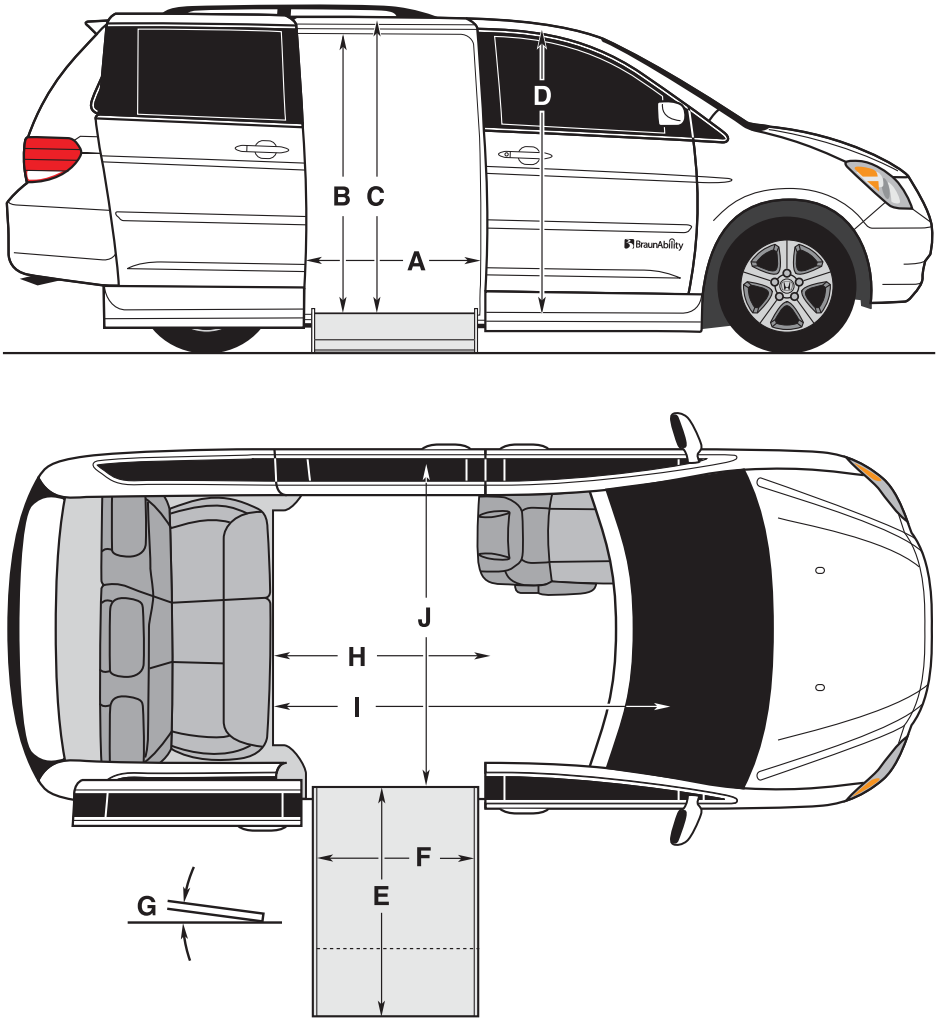
Item	Qty.	Description	Part Number
1	1	ACTUATOR/K2xG20-12V-08/2000#8"STROKE/12"	33440
2	1	E CLIP-1/2 SHAFT	26810
3	1	PIN-KNEEL PISTON	E60290
4	6	SCREW-#10-32 X 1/4" BHCS	28455
5	6	WASHER-#10 INTERNAL TOOTH	11540
6	1	GUIDE-CHAIN	E60297
7	1	WMT-KNEEL BOX-BASE COVER	E60284CW
8	1	WMT-KNEEL BOX-BASE	E60284W
9	1	NUT-5/16-18 SERRATED FLANGE/AUTO-BK	25131
10	1	STEEL ROD-1/2" X 1.58"	11733R001.58
11	1	STEEL ROD-1/2 X 3.25 1144CFS	14907R003.25
12	2	MICRO SWITCH-SPDT CHERRY	10904
13	4	NUT-#6-32 HEX	10951
14	4	WASHER-#6 INTERNAL TOOTH	77155
15	1	CHAIN-LEAF-4X4-.5 PITCH/COATED X 18 1/2"	27201R018.5
16	2	PIN-COTTER 1/32 X 1/2 (4X4)	23173
17	1	ASSY-ROLLER-ELECTRIC KNEEL	E60321A
18	1	KNEEL PISTON BRACKET	E60275
19	2	BOLT-CHAIN:4X4 7/16-14-1.5	27538
20	2	NUT-7/16 X 14-LOCK/ZINC PLATE	19888
21	2	PIN-COTTERED-4X4 LEAF CHAIN	21759
22	1	SCREW-5/16-18 X 1 1/2" SET	26647
23	2	BRACKET-MICRO-SWITCH	E60281
24	4	SCREW-#6-32 X 1 1/4" RPH MS	14377
25	1	SHRINK TUBING-3/4"	11456R003.75
26	1	ADAPTOR-AXLE TO CHAIN/KNEEL	E40287
27	1	SHRINK TUBING-3/4"	11456R008.25

Exploded View - 2010 Honda Conversion - Above Floor Kneel Assembly



DIMENSIONS

Dimensions - 2010 Honda Conversion - Foldout Ramp



All dimensions are for reference only.

		Foldout Ramp
Door Opening Usable Width (Slide Door)	A	31-1/2″
Door Opening Usable Height (Slide Door)	B	54-3/8″
Interior Height at Center of Van*	C	59-1/2″
Interior Height at Driver and Passenger Position**	D	59″
Ramp Length	E	52″
Ramp Width (Usable Clear Opening)	F	28-3/8″
Ramp Angle (with Vehicle Kneeled on Power Conversion)	G	8.6°
Interior Floor Length (Behind Front Seats)	H	60″
Overall Interior Floor Length (Flat Area)	I	89-1/2″
Interior Width at B Pillars	J	60″

Due to manufacturing tolerances both with the OEM vehicle and the conversion components, all dimensions may vary slightly from those shown.

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36122 Rev B
March 2011

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