



INSTALLATION GUIDE



78102 AWD shown

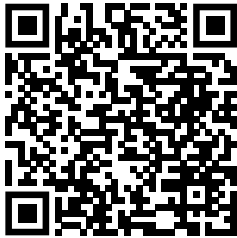
Kits 78101/78102

Tesla Model 3 AWD/RWD
Tesla Model Y AWD
FRONT APPLICATION

For maximum effectiveness and safety, please read these instructions completely before proceeding with installation.

Failure to read these instructions can result in an incorrect installation which could result in damage to the vehicle, minor to severe personal injury or death.

Protect your Air Lift Performance Purchase by Completing your Warranty Registration



Thank you for purchasing an Air Lift Performance product!

Take a photo of your sales receipt and then scan the
QR code to complete your online warranty registration.

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Introduction

Air Lift Performance thanks you for purchasing the most complete, fully engineered high-performance air suspension made for the Tesla Model 3 AWD/RWD and Model Y AWD (78102). Read these installation instructions to correctly and safely set up the vehicle for a #lifeonair.

Air Lift assumes that the installer has the mechanical knowledge and ability to work on vehicle suspension systems and has basic tools necessary to complete a suspension replacement project. Special tools needed to complete the installation are noted on the *System Overview* page.

Air Lift reserves the right to make changes and improvements to its products and publications at any time. For the latest version of this manual, contact Air Lift Performance at **(800) 248-0892** or visit **www.airliftperformance.com**.

An Air Lift Performance air management system is highly recommended for this product. Learn more at **air-lift.co/productlines**.

NOTATION EXPLANATION

Hazard notations appear in various locations in this publication. Information which is highlighted by one of these notations must be observed to help minimize risk of personal injury or possible improper installation which may render the vehicle unsafe. Notes are used to help emphasize areas of procedural importance and provide helpful suggestions. The following definitions explain the use of these notations as they appear throughout this guide.



DANGER

INDICATES IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.



WARNING

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.



CAUTION

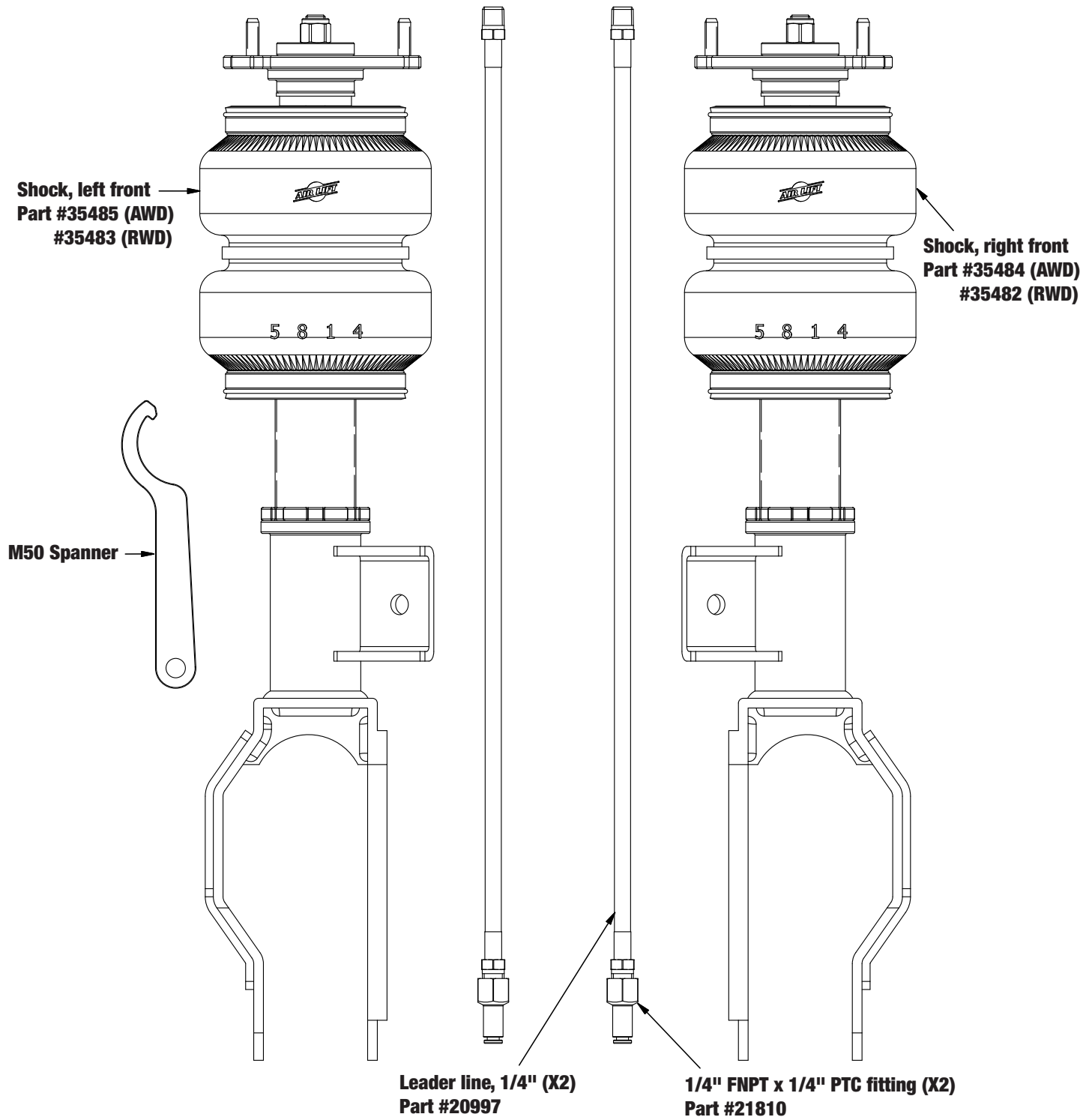
INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN DAMAGE TO THE VEHICLE OR MINOR PERSONAL INJURY.



NOTE

Used to help emphasize areas of procedural importance and provide helpful suggestions.

System Overview



*AWD Kit 78102 pictured.



Missing or damaged parts? Call Air Lift customer service at (800) 248-0892 for a replacement part.

Installing the System

IMPORTANT SAFETY NOTICES



DO NOT INFLATE AIR SPRINGS WHILE OFF OF THE VEHICLE. DAMAGE TO ASSEMBLY MAY RESULT AND VOID WARRANTY.



DO NOT WELD TO OR MODIFY PERFORMANCE STRUTS/SHOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.



AFTER INSTALLATION, ENSURE ALL ORIGINAL EQUIPMENT VEHICLE SAFETY FEATURES ARE PROPERLY CALIBRATED BY A QUALIFIED TECHNICIAN. CHANGING VEHICLE HEIGHT MAY AFFECT FUNCTIONING OF SAFETY SENSORS AND CAMERAS.

SECTION 1.

REMOVE THE SUSPENSION



RAISE THE FRONT OF THE VEHICLE WITH A JACK AT THE APPROVED LIFTING POINTS AND USE SAFETY STANDS TO SUPPORT THE VEHICLE.

NOTE

Installation procedures show AWD vehicle. Lower mount may look different.

1. Open the hood and remove the cowl cover at the rear of the front luggage compartment.



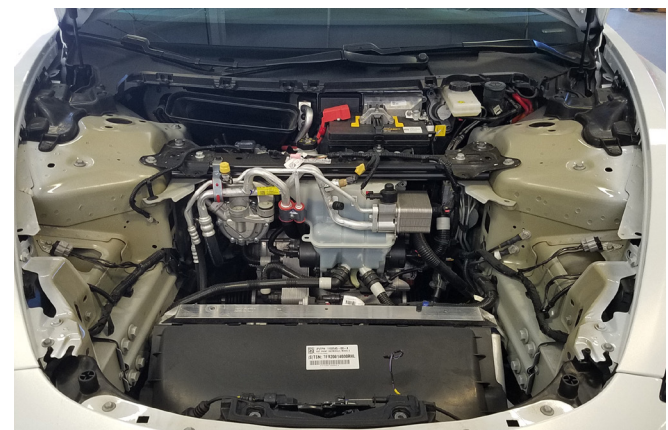
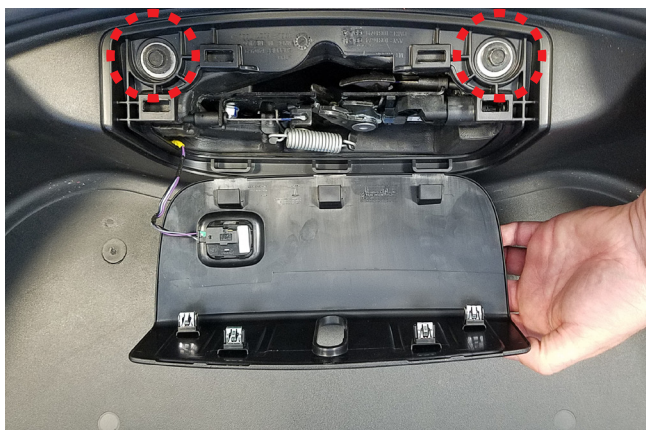
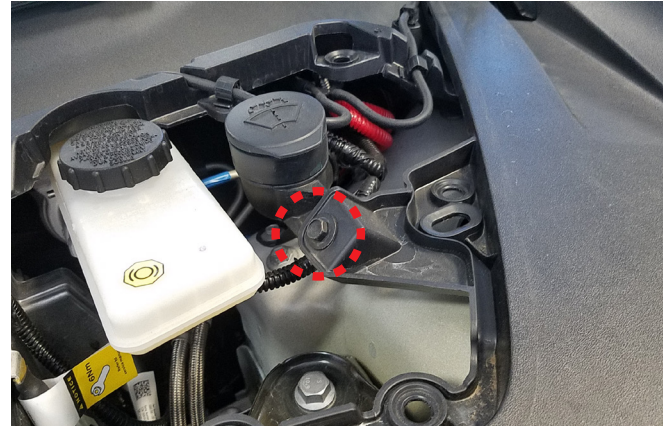
2. Remove the cabin intake duct by pulling up to release the clips.



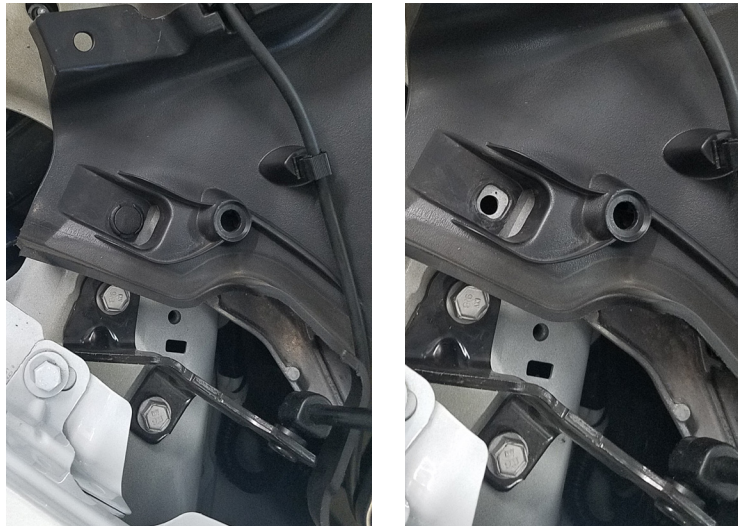
3. Remove the hood release cover by pulling up to release the clips. Once released, disconnect the hood release button connector.



4. Remove the attaching bolts for the underhood luggage compartment. Then remove the underhood luggage compartment from the vehicle.



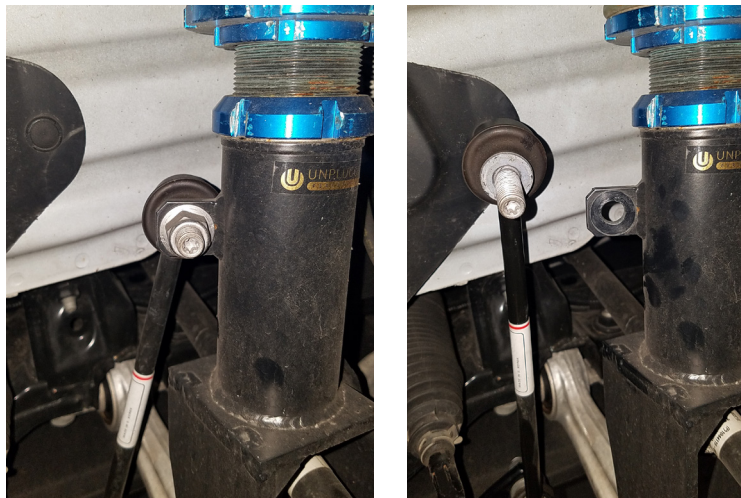
5. Remove the cowl panel retaining push pin shown below from both sides.



6. Raise the vehicle and support with safety stands. Remove the front wheel.



7. Remove the stabilizer bar end link from the strut tab.



8. Loosen and remove the tie rod end nut. Separate the tie rod end from the steering knuckle.



9. Remove the ABS sensor wire from the upper control arm by releasing the clips from the control arm mounting points.



10. Remove the brake line bracket from the body (dual motor vehicles only).



11. Loosen and remove the lower shock mount bolt.



12. Loosen and remove the upper ball joint retaining bolt. Separate the ball joint from the knuckle.



13. Remove the (4) bolts holding the upper control arm mount. It may be necessary to lift the cowl cover slightly to access the rear bolt. Do not discard the bolts. Remove the upper control arm mount and shock from the vehicle.

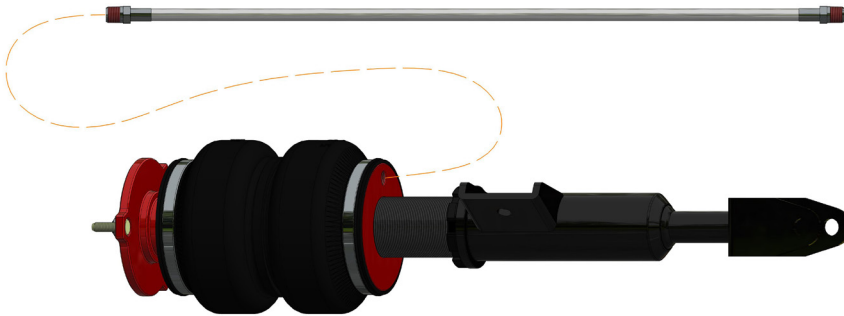


14. Remove the (3) upper shock mount nuts from the upper control arm mount and separate the shock from the upper control arm mount. Do not discard the upper mount nuts.



SECTION 2. INSTALL THE AIR SUSPENSION

1. Begin applying thread sealant to the threads of the leader line. Tighten the fitting to the leader line (1 3/4 turns beyond hand-tight). Tighten the leader line into the air spring 1 3/4 turns beyond hand-tight.



2. Using the (3) previously removed upper shock mount nuts, install the Air Lift Performance shock on the upper control arm mount and torque the nuts to 23Nm (17 lb.-ft.).



3. Install the shock and upper control arm mount assembly with the (4) previously removed bolts. Torque the larger bolts (circled in yellow) to 62Nm (45 lb.-ft.) and the smaller bolts (circled in red) to 35Nm (25 lb.-ft.).



4. Install the upper ball joint into the knuckle and reinstall the ball joint retaining bolt. Torque the bolt to 56Nm (41 lb.-ft.).



5. Raise the lower control arm and reinstall the lower shock mount bolt and nut hand-tight. Do not torque the bolt at this time.



6. Reinstall the tie rod end into the steering knuckle. Install the retaining nut and torque to 180Nm (132 lb.-ft.).



7. Reinstall the stabilizer bar end link to the strut tab and torque the nut to 98Nm (72 lb.-ft.).



8. Reinstall the ABS sensor wire clips on the upper control arm.



9. Replace the brake line bracket on the body. Install the nut and torque to 6Nm (4.5 lb.-ft.).
(Dual motor vehicles only)



10. Reinstall all previously removed panels and the underhood luggage compartment. Torque the underhood luggage compartment bolts to 5Nm (3.5 lb.-ft.).

SECTION 3. ROUTE THE AIR LINES



AFTER INSTALLATION, ENSURE ALL ORIGINAL EQUIPMENT VEHICLE SAFETY FEATURES ARE PROPERLY CALIBRATED BY A QUALIFIED TECHNICIAN. CHANGING VEHICLE HEIGHT MAY AFFECT FUNCTIONING OF SAFETY SENSORS AND CAMERAS.

1. Fully compress the suspension using a jack. With the suspension compressed, review the best routing for the air line that is clear of all suspension and steering components.
2. Routing should allow for the suspension to extend and steer without kinking, pulling the line tight or rubbing on other components. Following the brake line routing is often a good place to start. Check clearances to all other components.

Finished Installation

This image shows the finished installation.



Congratulations!

You are now the proud owner of an industry leading Air Lift Performance air suspension system. Enjoy!

Before Operating

SET THE RIDE HEIGHT

1. Refer to the User Guide supplied with this kit to set up the suspension.

Torque Specifications		
Location	Nm	lb.-ft.
Upper shock mount nuts	23	17
Small upper control arm mount bolts	35	25
Large upper control arm mount bolts	62	45
Upper ball joint retaining bolt	56	41
Lower shock mount bolt	106	78
Tie rod end nut	180	132
Stabilizer end link nut	98	72
Brake line mount nut	6	4.5
Upper control arm bolts	50	36
Underhood luggage compartment bolts	5	3.5
Wheel lugnuts	175	129

2. Upon successful completion of the installation, follow these pressure requirements for the air springs.



Suggested Driving Air Pressure



Maximum Air Pressure



FAILURE TO MAINTAIN ADEQUATE MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD) MAY RESULT IN EXCESSIVE BOTTOMING OUT AND **WILL VOID THE WARRANTY.**

CHECK FOR BINDING



MAKE SURE THE FRONT WHEELS ARE STRAIGHT WHEN DEFLATING AND REINFLATING AIR SPRINGS.

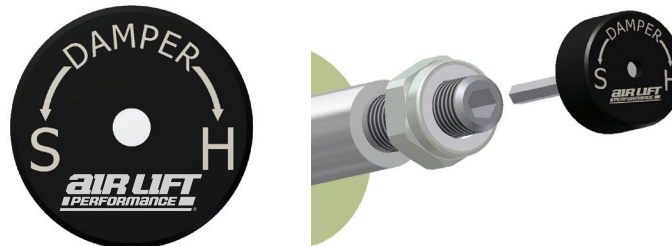
1. Inflate and deflate the system (do not exceed 8.6BAR [125 PSI]) to check for clearance or binding issues. With the air springs deflated, check clearances on everything so as not to pinch brake lines, vent tubes, etc. Clear lines if necessary.
2. Inflate the air springs to 5.2-6.2BAR (75-90 PSI) and check all connections for leaks.

INSTALLATION CHECKLIST

- ☐ **Clearance** — Inflate the air springs to 5.2-6.2BAR (75-90 PSI) and make sure there is at least 13mm (1/2") clearance from anything that might rub against the air spring. This should be checked with the air spring fully inflated and fully deflated.
- ☐ **Leak** — Inflate the air springs to 5.2-6.2BAR (75-90 PSI) and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.
- ☐ **Heat** — Be sure there is sufficient clearance from heat sources, at least 152mm (6") from air springs and air lines. If a heat shield was included in the kit, install it. If there is no heat shield, but one is required, call Air Lift customer service at **(800) 248-0892**.
- ☐ **Fastener** — Recheck all bolts for proper torque.
- ☐ **Road** — Inflate the air springs to recommended driving pressures (see previous page). Drive the vehicle 16km (10 miles) and recheck for clearance, loose fasteners and air leaks.
- ☐ **Operating instructions** — If professionally installed, the installer should review the operating instructions with the owner. Be sure to provide the owner with all paperwork that came with the kit.

DAMPING ADJUSTMENT

1. The dampers in this kit have 30 settings, or “clicks,” of adjustable compression and rebound damping characteristics. Damping is changed through the damper rod using the supplied adjuster (example shown here) or a 3mm hex key (not included).



2. Turn the adjuster clockwise (H) and the damping settings are hardened, reducing oscillations and body motion. Turn the adjuster counterclockwise (S) and the damping is softened.
3. Each damper in this kit is preset to “-24 clicks.” This means that the damper is adjusted 24 clicks away from full stiff, which starts at 0. Counting up from full stiff is the preferred method of keeping track of, or setting, damping. This setting was developed on a 2020 Tesla Model 3 Dual Motor.

NOTE

The damping adjustment setting may need to be adjusted based on your preference.

For more information, refer to the User Guide.

Limited Warranty and Return Policy

Air Lift Company provides a 1-year limited warranty to the original purchaser of Air Lift Performance damper kits from the date of original purchase, that the products will be free from defects in workmanship and materials when used on vehicles as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth in the full Limited Warranty and Return Policy that is available online at www.airliftperformance.com/warranty.

For additional warranty information contact Air Lift Company customer service.

Thank you for purchasing Air Lift Performance products!

Need Help?

The Air Lift Company customer service department is open from 8 a.m. to 8 p.m. ET Monday through Friday. Call (800) 248-0892 or (517) 322-2144 for calls from outside the U.S. and Canada.



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