



Lenovo Z370/Z470/Z570

Hardware Maintenance Manual



Note:

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 115.

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About this manual

This manual contains service and reference information for the following Lenovo product:

IdeaPad Z370/Z470/Z570

Use this manual to troubleshoot problems.

The manual is divided into the following sections:

- The common sections provide general information, guidelines, and safety information required for servicing computers.
- The product-specific section includes service, reference, and product-specific parts information.

Important:

This manual is intended only for trained servicers who are familiar with Lenovo products. Use this manual to troubleshoot problems effectively.

Before servicing a Lenovo product, make sure to read all the information under “Safety information” on page 1 and “Important service information” on page 16.

Safety information

This chapter presents the following safety information that you need to get familiar with before you service a Lenovo computer:

- “General safety” on page 2
- “Electrical safety” on page 3
- “Safety inspection guide” on page 5
- “Handling devices that are sensitive to electrostatic discharge” on page 6
- “Grounding requirements” on page 6
- “Safety notices: multilingual translations” on page 7
- “Laser compliance statement” on page 14

General safety

Follow these rules below to ensure general safety:

- Observe a good housekeeping in the area where the machines are put during and after the maintenance.
- When lifting any heavy object:
 1. Make sure that you can stand safely without slipping.
 2. Distribute the weight of the object equally between your feet.
 3. Use a slow lifting force. Never move suddenly or twist when you attempt to lift it.
 4. Lift it by standing or pushing up with your leg muscles; this action could avoid the strain from the muscles in your back. Do not attempt to lift any object that weighs more than 16 kg (35 lb) or that you think is too heavy for you.
- Do not perform any action that causes hazards to the customer, or that makes the machine unsafe.
- Before you start the machine, make sure that other service representatives and the customer are not in a hazardous position.
- Please remove covers and other parts in a safe place, away from all personnel, while you are servicing the machine.
- Keep your toolcase away from walk areas so that other people will not trip it over.
- Do not wear loose clothing that can be trapped in the moving parts of the machine. Make sure that your sleeves are fastened or rolled up above your elbows. If your hair is long, fasten it.
- Insert the ends of your necktie or scarf inside clothing or fasten it with the nonconductive clip, about 8 centimeters (3 inches) from the end.
- Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for your clothing.

Attention: Metal objects are good electrical conductors.
- Wear safety glasses when you are hammering, drilling, soldering, cutting wire, attaching springs, using solvents, or working in any other conditions that may be hazardous to your eyes.
- After service, reinstall all safety shields, guards, labels, and ground wires. Replace any safety device that is worn or defective.
- Reinstall all covers correctly before returning the machine to the customer.
- Fan louvers on the machine help to prevent the overheating of internal components. Do not obstruct fan louvers or cover them with labels or stickers.

Electrical safety

Observe the following rules when working on electrical equipments.

Important:

Use only approved tools and test equipments. Some hand tools have handles covered with a soft material that does not insulate you when working with live electrical currents.

Many customers have rubber floor mats near their machines that contain small conductive fibers to decrease electrostatic discharges. Do not use such kind of mat to protect yourself from electrical shock.

- Find the room emergency power-off (EPO) switch, disconnecting switch, or electrical outlet. If an electrical accident occurs, you can then operate the switch or unplug the power cord quickly.
- Do not work alone under hazardous conditions or near the equipment that has hazardous voltages.
- Disconnect all power before:
 - Performing a mechanical inspection
 - Working near power supplies
 - Removing or installing main units
- Before you start to work on the machine, unplug the power cord. If you cannot unplug it, ask the customer to power-off the wall box that supplies power to the machine, and to lock the wall box in the off position.
- If you need to work on a machine that has exposed electrical circuits, observe the following precautions:
 - Ensure that another person, familiar with the power-off controls, is near you.

Attention: Another person must be there to switch off the power, if necessary.

- Use only one hand when working with powered-on electrical equipment; keep the other hand in your pocket or behind your back.

Attention: An electrical shock can occur only when there is a complete circuit. By observing the above rule, you may prevent a current from passing through your body.

- When using testers, set the controls correctly and use the approved probe leads and accessories for that tester.
- Stand on suitable rubber mats (obtained locally, if necessary) to insulate you from grounds such as metal floor strips and machine frames.

Observe the special safety precautions when you work with very high voltages; instructions for these precautions are in the safety sections of maintenance information. Be extremely careful when you measure the high voltages.

- Regularly inspect and maintain your electrical hand tools for safe operational condition.
- Do not use worn or broken tools and testers.
- Never assume that power has been disconnected from a circuit. First, check it to make sure that it has been powered off.

- Always look carefully for possible hazards in your work area. Examples of these hazards are moist floors, nongrounded power extension cables, power surges, and missing safety grounds.
- Do not touch live electrical circuits with the reflective surface of a plastic dental mirror. The surface is conductive; such touching can cause personal injury and machine damage.
- Do not service the following parts with the power on when they are removed from their normal operating places in a machine:
 - Power supply units
 - Pumps
 - Blowers and fans
 - Motor generatorsand similar units. (This practice ensures correct grounding of the units.)
- If an electrical accident occurs:
 - Use caution: do not become a victim yourself.
 - Switch off the power.
 - Send the victim to get medical aid.

Safety inspection guide

The purpose of this inspection guide is to assist you in identifying potential unsafe conditions. As each machine was designed and built, required safety items were installed to protect users and service personnel from injury. This guide addresses only those items. You should use good judgment to identify potential safety hazards due to attachment of non-Lenovo features or options not covered by this inspection guide.

If any unsafe conditions are present, you must determine how serious the apparent hazard could be and whether you can continue without first correcting the problem.

Consider these conditions and the safety hazards they present:

- Electrical hazards, especially primary power (primary voltage on the frame can cause serious or fatal electrical shock)
- Explosive hazards, such as a damaged CRT face or a bulging capacitor
- Mechanical hazards, such as loose or missing hardware

To determine whether there are any potential unsafe conditions, use the following checklist at the beginning of every service task. Begin the checks with the power off, and the power cord disconnected.

Checklist:

1. Check exterior covers for damage (loose, broken, or sharp edges).
2. Turn off the computer. Disconnect the power cord.
3. Check the power cord for:
 - a. A third-wire ground connector in good condition. Use a meter to measure third-wire ground continuity for 0.1 ohm or less between the external ground pin and the frame ground.
 - b. The power cord should be the type specified in the parts list.
 - c. Insulation must not be frayed or worn.
4. Check for cracked or bulging batteries.
5. Remove the cover.
6. Check for any obvious non-Lenovo alterations. Use good judgment as to the safety of any non-Lenovo alterations.
7. Check inside the unit for any obvious unsafe conditions, such as metal filings, contamination, water or other liquids, or signs of fire or smoke damage.
8. Check for worn, frayed, or pinched cables.
9. Check that the power-supply cover fasteners (screws or rivets) have not been removed or tampered with.

Handling devices that are sensitive to electrostatic discharge

Any computer part containing transistors or integrated circuits (ICs) should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the machine, the part, the work mat, and the person handling the part are all at the same charge.

Notes:

1. Use product-specific ESD procedures when they exceed the requirements noted here.
2. Make sure that the ESD protective devices you use have been certified (ISO 9000) as fully effective.

When handling ESD-sensitive parts:

- Keep the parts in protective packages until they are inserted into the product.
- Avoid contact with other people.
- Wear a grounded wrist strap against your skin to eliminate static on your body.
- Prevent the part from touching your clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
- Select a grounding system, such as those listed below, to provide protection that meets the specific service requirement.

Notes:

The use of a grounding system to guard against ESD damage is desirable but not necessary.

- Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
- When working on a double-insulated or battery-operated system, use an ESD common ground or reference point. You can use coax or connector-outside shells on these systems.
- Use the round ground prong of the ac plug on ac-operated computers.

Grounding requirements

Electrical grounding of the computer is required for operator safety and correct system function. Proper grounding of the electrical outlet can be verified by a certified electrician.

Safety notices: multilingual translations

The safety notices in this section are provided in English, French, German, Hebrew, Italian, Japanese, and Spanish.

Safety notice 1

Before the computer is powered on after FRU replacement, make sure all screws, springs, and other small parts are in place and are not left loose inside the computer. Verify this by shaking the computer and listening for rattling sounds. Metallic parts or metal flakes can cause electrical shorts.

Avant de remettre l'ordinateur sous tension après remplacement d'une unité en clientèle, vérifiez que tous les ressorts, vis et autres pièces sont bien en place et bien fixées. Pour ce faire, secouez l'unité et assurez-vous qu'aucun bruit suspect ne se produit. Des pièces métalliques ou des copeaux de métal pourraient causer un court-circuit.

Bevor nach einem FRU-Austausch der Computer wieder angeschlossen wird, muß sichergestellt werden, daß keine Schrauben, Federn oder andere Kleinteile fehlen oder im Gehäuse vergessen wurden. Der Computer muß geschüttelt und auf Klappergeräusche geprüft werden. Metallteile oder-splitter können Kurzschlüsse erzeugen.

לפני הפעלת המחשב לאחר החלפת FRU יש לוודא שכל הברגים, הקפיצים, וחלקים קטנים אחרים נמצאים במקומם ואינם חופשיים לזוז בתוך המחשב. כדי לוודא זאת, יש ללטלט את המחשב ולהקשיב לגילוי קולות שקשוק. חלקי או שבבי מתכת עלולים לגרום לקצרים חשמליים.

Prima di accendere l'elaboratore dopo che é stata effettuata la sostituzione di una FRU, accertarsi che tutte le viti, le molle e tutte le altre parti di piccole dimensioni siano nella corretta posizione e non siano sparse all'interno dell'elaboratore. Verificare ciò scuotendo l'elaboratore e prestando attenzione ad eventuali rumori; eventuali parti o pezzetti metallici possono provocare cortocircuiti pericolosi.

FRUの交換後、コンピュータの電源を入れる前に、ねじ、バネ、その他の小さな部品がすべて正しい位置にあり、またコンピュータの内部で緩んでいないことを確認してください。これを確認するには、コンピュータを振って、カチャカチャと音がしないか確かめます。金属部品や金属破片はショートの原因になることがあります。

Antes de encender el sistema despues de sustituir una FRU, compruebe que todos los tornillos, muelles y demás piezas pequeñas se encuentran en su sitio y no se encuentran sueltas dentro del sistema. Compruébelo agitando el sistema y escuchando los posibles ruidos que provocarían. Las piezas metálicas pueden causar cortocircuitos eléctricos.

Safety notice 2

DANGER

Some standby batteries contain a small amount of nickel and cadmium. Do not disassemble a standby battery, recharge it, throw it into fire or water, or short-circuit it. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

Certaines batteries de secours contiennent du nickel et du cadmium. Ne les démontez pas, ne les rechargez pas, ne les exposez ni au feu ni à l'eau. Ne les mettez pas en court-circuit. Pour les mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la pile de sauvegarde ou celle de l'horloge temps réel, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. Une batterie ou une pile inappropriée risque de prendre feu ou d'exploser.

Die Bereitschaftsbatterie, die sich unter dem Diskettenlaufwerk befindet, kann geringe Mengen Nickel und Cadmium enthalten. Sie darf nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Bereitschafts- oder Systembatterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללות המתנה מסוימות מכילות כמות קטנה של ניקל וקדמיום. אין למפרק סוללת המתנה, לטעון אותה מחדש, להשליך אותה לאש או למים או לקצר אותה. יש לשלוק את הסוללה בנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

Alcune batterie di riserva contengono una piccola quantità di nichel e cadmio. Non smontarle, ricaricarle, gettarle nel fuoco o nell'acqua né cortocircuitarle. Smaltirle secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria dell'RTC (real time clock) o la batteria di supporto, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

予備バッテリーの中には少量のニッケルとカドミウムが含まれているものがあります。したがって、予備バッテリーの分解、再充電、火または水の中への投棄、またはショートさせることは決して行わないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Algunas baterías de reserva contienen una pequeña cantidad de níquel y cadmio. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 3

DANGER

The battery pack contains small amounts of nickel. Do not disassemble it, throw it into fire or water, or short-circuit it. Dispose of the battery pack as required by local ordinances or regulations. Use only the battery in the appropriate parts listing when replacing the battery pack. Use of an incorrect battery can result in ignition or explosion of the battery.

La batterie contient du nickel. Ne la démontez pas, ne l'exposez ni au feu ni à l'eau. Ne la mettez pas en court-circuit. Pour la mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la batterie, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. En effet, une batterie inappropriée risque de prendre feu ou d'exploser.

Akkus enthalten geringe Mengen von Nickel. Sie dürfen nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

מארו הסוללה מכיל כמות קטנה של ניקל
וקדמיום. אין לפרק את מארו הסוללה, להשליך
אותו לאש או למים או לקצר אותו. יש לשלוק את
מארו הסוללה הסוללה כנדרש על ידי התקנות
והחוקים המקומיים. יש להשתמש רק בסוללה
המופיעה ברשימת החלקים המתאימה בזמן החלפת
מארו הסוללה. שימוש בסוללה לא מתאימה עלול
לגרום להצתה או התפוצצות של הסוללה.

La batteria contiene piccole quantità di nichel. Non smontarla, gettarla nel fuoco o nell'acqua né cortocircuitarla. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

バッテリー・パックには少量のニッケルが含まれています。バッテリー・パックを分解したり、火または水の中に投げ込んだり、ショートさせないでください。バッテリー・パックの廃棄にあたっては、地方自治体の条例または規則に従ってください。バッテリー・パックを交換するときは、適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Las baterías contienen pequeñas cantidades de níquel. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas al sustituir la batería. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 4

DANGER

The lithium battery can cause a fire, an explosion, or a severe burn. Do not recharge it, remove its polarized connector, disassemble it, heat it above 100°C (212°F), incinerate it, or expose its cell contents to water. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

La pile de sauvegarde contient du lithium. Elle présente des risques d'incendie, d'explosion ou de brûlures graves. Ne la rechargez pas, ne retirez pas son connecteur polarisé et ne la démontez pas. Ne l'exposez pas à une température supérieure à 100°C, ne la faites pas brûler et n'en exposez pas le contenu à l'eau. Mettez la pile au rebut conformément à la réglementation en vigueur. Une pile inappropriée risque de prendre feu ou d'exploser.

Die Systematterie ist eine Lithiumatterie. Sie kann sich entzünden, explodieren oder schwere Verbrennungen hervorrufen. Batterien dieses Typs dürfen nicht aufgeladen, zerlegt, über 100 C erhitzt oder verbrannt werden. Auch darf ihr Inhalt nicht mit Wasser in Verbindung gebracht oder der zur richtigen Polung angebrachte Verbindungsstecker entfernt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללת הליתיום עלולה לגרום לשריפה, להתפוצצות או לכוויות קשות. אין לטעון אותה מחדש, לשלק את המחבר המקוטב שלה, למרק אותה או לחמם אותה לטמפרטורה העולה על 100 מעלות צלזיוס. אין לשרוף את הסוללה ואין לחשוף את תוכן התא למים. יש לשלק את הסוללה כנדרש בתקנות ובחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימים. שימוש בסוללה אחרת עלול לגרום לסכנת שריפה או התפוצצות.

La batteria di supporto è una batteria al litio e può incendiarsi, esplodere o procurare gravi ustioni. Evitare di ricaricarla, smontarne il connettore polarizzato, smontarla, riscaldarla ad una temperatura superiore ai 100 gradi centigradi, incendiarla o gettarla in acqua. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

リチウム・バッテリーは、火災、爆発、または重症のやけどを引き起こすことがあります。バックアップ・バッテリーの充電、その極性コネクタの取り外し、バッテリー本体の分解、100℃(212°F)以上の加熱、焼却、電池の中身を水に浸すことはしないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

La batería de repuesto es una batería de litio y puede provocar incendios, explosiones o quemaduras graves. No la recargue, ni quite el conector polarizado, ni la desmonte, ni caliente por encima de los 100°C (212°F), ni la incinere ni exponga el contenido de sus celdas al agua. Deséchela tal como dispone la normativa local.

Safety notice 5

If the LCD breaks and the fluid from inside the LCD gets into your eyes or on your hands, immediately wash the affected areas with water at least for 15 minutes. Seek medical care if any symptoms caused by the fluid are present after washing.

Si le panneau d'affichage à cristaux liquides se brise et que vous recevez dans les yeux ou sur les mains une partie du fluide, rincez-les abondamment pendant au moins quinze minutes. Consultez un médecin si des symptômes persistent après le lavage.

Die Leuchtstoffröhre im LCD-Bildschirm enthält Quecksilber. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Der LCD-Bildschirm besteht aus Glas und kann zerbrechen, wenn er unsachgemäß behandelt wird oder der Computer auf den Boden fällt. Wenn der Bildschirm beschädigt ist und die darin befindliche Flüssigkeit in Kontakt mit Haut und Augen gerät, sollten die betroffenen Stellen mindestens 15 Minuten mit Wasser abgespült und bei Beschwerden anschließend ein Arzt aufgesucht werden.

אם מסך הנוזלי (LCD) נשבר והנוזל מתוך המסך בא במגע עם עיניים או ידיים, שטפו את האזורים הנוגעים מיד במים במשך 15 דקות לפחות. פנו לקבלת עזרה רפואית אם תסמינים הנובעים מהמגע עם הנוזל נמשכים לאחר השטיפה.

Nel caso che caso l'LCD si dovesse rompere ed il liquido in esso contenuto entrasse in contatto con gli occhi o le mani, lavare immediatamente le parti interessate con acqua corrente per almeno 15 minuti; poi consultare un medico se i sintomi dovessero permanere.

LCD が破損し、LCD 中の液体が目に入ったり、手に触れたりした場合は、液体が触れた部分を少なくとも 15 分間洗い流してください。洗い流した後に、液体によって何らかの症状が現れた場合は、医師の治療を受けてください。

Si la LCD se rompe y el fluido de su interior entra en contacto con sus ojos o sus manos, lave inmediatamente las áreas afectadas con agua durante 15 minutos como mínimo. Obtenga atención medica si se presenta algún

Safety notice 6

DANGER

To avoid shock, do not remove the plastic cover that protects the lower part of the inverter card.

Afin d'éviter tout risque de choc électrique, ne retirez pas le cache en plastique protégeant la partie inférieure de la carte d'alimentation.

Aus Sicherheitsgründen die Kunststoffabdeckung, die den unteren Teil der Spannungswandlerplatine umgibt, nicht entfernen.

כדי למנוע התחשמלות, אין להסיר את מכסה הפלסטיק המגן על חלקו התחתון של הכרטיס ההפוך.

Per evitare scosse elettriche, non rimuovere la copertura in plastica che avvolge la parte inferiore della scheda invertitore.

感電を防ぐため、インバーター・カードの下部を保護しているプラスチック・カバーを外さないでください。

Para evitar descargas, no quite la cubierta de plástico que rodea la parte baja de la tarjeta invertida.

Safety notice 7

DANGER

Though the main batteries have low voltage, a shorted or grounded battery can produce enough current to burn personnel or combustible materials.

Bien que le voltage des batteries principales soit peu élevé, le court-circuit ou la mise à la masse d'une batterie peut produire suffisamment de courant pour brûler des matériaux combustibles ou causer des brûlures corporelles graves.

Obwohl Hauptbatterien eine niedrige Spannung haben, können sie doch bei Kurzschluß oder Erdung genug Strom abgeben, um brennbare Materialien zu entzünden oder Verletzungen bei Personen hervorzurufen.

אף שהסוללות הראשיות הן בעלות מתח נמוך, סוללה מקוצרת או מוארקת עלולה להפיק זרם מספיק לגרימת כוויות או להצתת חומרים דליקים.

Sebbene le batterie di alimentazione siano a basso voltaggio, una batteria in corto circuito o a massa può fornire corrente sufficiente da bruciare materiali combustibili o provocare ustioni ai tecnici di manutenzione.

メイン・バッテリーの電圧は低くても、ショートしたり、接地したバッテリーが、作業者にやけどを負わせたり、可燃物を燃やすだけの電流を発生させる場合があります。

Aunque las baterías principales tienen un voltaje bajo, una batería cortocircuitada o con contacto a tierra puede producir la corriente suficiente como para quemar material combustible o provocar quemaduras en el personal.

Safety notice 8

DANGER

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

Avant de retirer une unité remplaçable en clientèle, mettez le système hors tension, débranchez tous les cordons d'alimentation des socles de prise de courant, retirez la batterie et déconnectez tous les cordons d'interface.

Die Stromzufuhr muß abgeschaltet, alle Stromkabel aus der Steckdose gezogen, der Akku entfernt und alle Verbindungskabel abgenommen sein, bevor eine FRU entfernt wird.

לפני סילוק FRU כלשהו, יש לכבות את המחשב,
לנתק את כל כבלי החשמל מהשקע, להוציא
את סוללת הסוללה, ואז לנתק כבלי חיבור אחרים
אם יש כאלה.

Prima di rimuovere qualsiasi FRU, spegnere il sistema, scollegare dalle prese elettriche tutti i cavi di alimentazione, rimuovere la batteria e poi scollegare i cavi di interconnessione.

FRUを取り外す前に、ThinkPadの電源を切って、すべての電源コードをコンセントから外してください。次に、バッテリー・パックを外し、相互接続ケーブルを外してください。

Antes de quitar una FRU, apague el sistema, desenchufe todos los cables de las tomas de corriente eléctrica, quite la batería y, a continuación, desconecte cualquier cable de conexión entre dispositivos.

Laser compliance statement

Some models of Lenovo computer are equipped from the factory with an optical storage device such as a CD-ROM drive or a DVD-ROM drive. Such devices are also sold separately as options. If one of these drives is installed, it is certified in the U.S. to conform to the requirements of the Department of Health and Human Services 21 Code of Federal Regulations (DHHS 21 CFR) Subchapter J for Class 1 laser products. Elsewhere, the drive is certified to conform to the requirements of the International Electrotechnical Commission (IEC) 825 and CENELEC EN 60 825 for Class 1 laser products.

If a CD-ROM drive, a DVD-ROM drive, or another laser device is installed, note the following:

⚠ CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

O uso de controles, ajustes ou desempenho de procedimentos diferentes daqueles aqui especificados pode resultar em perigosa exposição à radiação.

凡未在这里指明的任何控制用法、调整、行为，
都会导致严重后果。

Pour éviter tout risque d'exposition au rayon laser, respectez les consignes de réglage et d'utilisation des commandes, ainsi que les procédures décrites.

Werden Steuer- und Einstellelemente anders als hier festgesetzt verwendet, kann gefährliche Laserstrahlung auftreten.

Az itt előírt eljárásoktól, beállításoktól és vezérlésektől
eltérni a lézersugárzás veszélye miatt kockázatos!

L'utilizzo di controlli, regolazioni o l'esecuzione di procedure diverse da quelle specificate possono provocare l'esposizione a.

Использование элементов настройки и
выполнение процедур иных, чем указано
здесь, может привести к опасному
радиационному облучению.

Použitie kontrol, úprav alebo iných vykonaní od iných
výrobcov, ako je v tomto špecifikované, mohlo by mať
za následok nebezpečenstvo vystavenia sa vyžiarovaniu.

本書で指定された内容以外の、お客様による整備、調整、または手順を行った場合、レーザー光の放射の危険があります。

El uso de controles o ajustes o la ejecución de procedimientos distintos de los aquí especificados puede provocar la exposición a radiaciones peligrosas.

Opening the CD-ROM drive, the DVD-ROM drive, or any other optical storage device could result in exposure to hazardous laser radiation. There are no serviceable parts inside those drives. **Do not open.**

A CD-ROM drive, a DVD-ROM drive, or any other storage device installed may contain an embedded Class 3A or Class 3B laser diode. Note the following:

 DANGER

Emits visible and invisible laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam.

Radiação por raio laser ao abrir. Não olhe fixo no feixe de luz, não olhe diretamente por meio de instrumentos óticos e evite exposição direta com o feixe de luz.

开启时会有激光发射时，请勿直视激光束，请勿直接查看视觉仪器，并且避免直接接触在激光光束之中。

Rayonnement laser si carter ouvert. Évitez de fixer le faisceau, de le regarder directement avec des instruments optiques, ou de vous exposer au rayon.

Laserstrahlung bei geöffnetem Gerät. Nicht direkt oder über optische Instrumente in den Laserstrahl sehen und den Strahlungsbereich meiden.

Kinyitáskor lézersugár ! Ne nézzen bele se szabad szemmel, se optikai eszközökkel. Kerülje a sugárnyalábbal való érintkezést!

Aprendo l'unità vengono emesse radiazioni laser. Non fissare il fascio, non guardarlo direttamente con strumenti ottici e evitare l'esposizione diretta al fascio.

Открывая, берегитесь лазерного излучения. Не смотрите на луч, не разглядывайте его с помощью оптических инструментов, а также избегайте прямого воздействия лазерного луча.

Keď je laserová jednotka otvorená. Vyhnite sa priamemu pohľadu a neľadte priamo s optickými nástrojmi do lúča a vyhnite sa priamemu vystaveniu lúčov.

開けるとレーザー光が放射されます。光線を見つめたり、光学機械を使って直接見たりしないでください。

Radiación láser al abrir. No mire fijamente ni examine con instrumental óptico el haz de luz. Evite la exposición directa al haz.

Important service information

This chapter presents the following important service information:

- “Strategy for replacing FRUs” on page 16
 - “Strategy for replacing a hard disk drive” on page 17
 - “Important notice for replacing a system board” on page 17
- “Important information about replacing RoHS compliant FRUs” on page 18

Important:

BIOS and device driver fixes are customer-installable. The BIOS and device drivers are posted on the customer support site:

<http://consumersupport.lenovo.com/>.

Strategy for replacing FRUs

Before replacing parts:

Make sure that all software fixes, drivers, and BIOS downloads are installed before replacing any FRUs listed in this manual.

After a system board is replaced, ensure that the latest BIOS is loaded to the system board before completing the service action.

To download software fixes, drivers, and BIOS, follow the steps below:

1. Go to <http://consumersupport.lenovo.com/>.
2. Enter the serial number or select a product or use Lenovo smart downloading.
3. Select the BIOS/Driver/Applications and download.
4. Follow the directions on the screen and install the necessary software.

Use the following strategy to prevent unnecessary expense for replacing and servicing FRUs:

- If you are instructed to replace an FRU, but the replacement does not solve the problem, reinstall the original FRU before you continue.
- Some computers have both a processor board and a system board. If you are instructed to replace either of them, and replacing one of them does not solve the problem, reinstall that board, and then replace the other one.
- If an adapter or a device consists of more than one FRU, any of the FRUs may be the cause of the error. Before replacing the adapter or device, remove the FRUs one by one to see if the symptoms change. Replace only the FRU that changed the symptoms.

Attention: The setup configuration on the computer you are servicing may have been customized. Running Automatic Configuration may alter the settings. Note the current configuration settings (using the View Configuration option); then, when service has been completed, verify that those settings remain in effect.

Strategy for replacing a hard disk drive

Always try to run a low-level format before replacing a hard disk drive. This will cause all customer data on the hard disk to be lost. Make sure that the customer has a current backup of the data before performing this action.

Attention: The drive startup sequence in the computer you are servicing may have been changed. Be extremely careful during write operations such as copying, saving, or formatting. If you select an incorrect drive, data or programs can be overwritten.

Important notice for replacing a system board

Some components mounted on a system board are very sensitive. Improper handling can cause damage to those components, and may cause a system malfunction.

Attention: When handling a system board:

- Do not drop the system board or apply any excessive force to it.
- Avoid rough handling of any kind.
- Avoid bending the system board and hard pushing to prevent cracking at each BGA (Ball Grid Array) chipset.

Important information about replacing RoHS compliant FRUs

RoHS, The Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (2002/95/EC) is a European Union legal requirement affecting the global electronics industry. RoHS requirements must be implemented on Lenovo products placed on the market after June 2006. Products on the market before June 2006 are not required to have RoHS compliant parts. If the original FRU parts are non-compliant, replacement parts can also be non-compliant. In all cases if the original FRU parts are RoHS compliant, the replacement part must also be RoHS compliant.

Note: RoHS and non-RoHS FRU part numbers with the same fit and function are identified with unique FRU part numbers.

Lenovo plans to transit to RoHS compliance well before the implementation date and expects its suppliers to be ready to support Lenovo’s requirements and schedule in the EU. Products sold in 2005 and 2006 will contain some RoHS compliant FRUs. The following statement pertains to these products and any product Lenovo produces containing RoHS compliant FRUs.

RoHS compliant FRUs have unique FRU part numbers. Before or after the RoHS implementation date, failed RoHS compliant parts must always be replaced with RoHS compliant ones, so only the FRUs identified as compliant in the system HMM or direct substitutions for those FRUs may be used.

Products marketed before June 2006		Products marketed after June 2006	
Current or original part	Replacement FRU	Current or original part	Replacement FRU
Non-RoHS	Can be Non-RoHS	Must be RoHS	Must be RoHS
Non-RoHS	Can be RoHS		
Non-RoHS	Can sub to RoHS		
RoHS	Must be RoHS		

Note: A direct substitution is a part with a different FRU part number that is automatically shipped by the distribution center at the time of the order.

General checkout

This chapter presents the following information:

- “What to do first” on page 20
- “Power system checkout” on page 21

Before you go to the checkout, make sure to read the following important notes:

Important notes:

- **Only certified trained personnel can service the computer.**
- **Before replacing any FRU, read the entire page on removing and replacing FRUs.**
- **When you replace FRUs, use new nylon-coated screws.**
- **Be extremely careful during such write operations as copying, saving, or formatting.** Drives in the computer that you are servicing sequence might have been altered. If you select an incorrect drive, data or programs might be overwritten.
- **Replace an FRU only with another FRU of the correct model.** When you replace an FRU, make sure that the machine model and the FRU part number are correct by referring to the FRU parts list.
- **An FRU should not be replaced just because of a single, unreproducible failure.** Single failures can occur for a variety of reasons that have nothing to do with a hardware defect, such as cosmic radiation, electrostatic discharge, or software errors. Consider replacing an FRU only when a problem recurs. If you suspect that an FRU is defective, clear the error logs and run the test again. If the error does not recur, do not replace the FRU.
- **Be careful not to replace a nondefective FRU.**

What to do first

When you do return an FRU, you must include the following information in the parts exchange form or parts return form that you attach to it:

1. Name and phone number of servicer
2. Date of service
3. Date on which the machine failed
4. Date of purchase
5. Procedure index and page number in which the failing FRU was detected
6. Failing FRU name and part number
7. Machine type, model number, and serial number
8. Customer's name and address

Note for warranty: During the warranty period, the customer may be responsible for repair costs if the computer damage was caused by misuse, accident, modification, unsuitable physical or operating environment, or improper maintenance by the customer.

The following is a list of some common items that are not covered under warranty and some symptoms that might indicate that the system was subjected to stress beyond normal use.

Before checking problems with the computer, determine whether the damage is covered under the warranty by referring to the following list:

The following are not covered under warranty:

- LCD panel cracked from the application of excessive force or from being dropped
- Scratched (cosmetic) parts
- Distortion, deformation, or discoloration of the cosmetic parts
- Plastic parts, latches, pins, or connectors that have been cracked or broken by excessive force
- Damage caused by liquid spilled into the system
- Damage caused by the improper insertion of a PC Card or the installation of an incompatible card
- Improper disk insertion or use of an optical drive
- Diskette drive damage caused by pressure on the diskette drive cover, foreign material in the drive, or the insertion of a diskette with multiple labels
- Damaged or bent diskette eject button
- Fuses blown by attachment of a nonsupported device
- Forgotten computer password (making the computer unusable)
- Sticky keys caused by spilling a liquid onto the keyboard
- Use of an incorrect AC adapter on laptop products

The following symptoms might indicate damage caused by nonwarranted activities:

- Missing parts might be a symptom of unauthorized service or modification.
- If the spindle of a hard disk drive becomes noisy, it may have been subjected to excessive force, or dropped.

Power system checkout

To verify a symptom, follow the steps below:

1. Turn off the computer.
2. Remove the battery pack.
3. Connect the AC adapter.
4. Make sure that power is supplied when you turn on the computer.
5. Turn off the computer.
6. Disconnect the AC adapter and install the charged battery pack.
7. Make sure that the battery pack supplies power when you turn on the computer.

If you suspect a power problem, see the appropriate one of the following power supply checkouts:

- “Checking the AC adapter” on page 21
- “Checking operational charging” on page 21
- “Checking the battery pack” on page 22

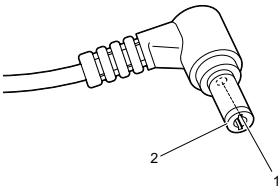
Checking the AC adapter

You are here because the computer fails only when the AC adapter is used.

- If the power-on indicator does not turn on, check the power cord of the AC adapter for correct continuity and installation.
- If the computer does not charge during operation, go to “Checking operational charging”.

To check the AC adapter, follow the steps below:

1. Unplug the AC adapter cable from the computer.
2. Measure the output voltage at the plug of the AC adapter cable. See the following figure:



Pin	Voltage (V DC)
1	+20
2	0

Note: Output voltage for the AC adapter pin No. 2 may differ from the one you are servicing.

3. If the voltage is not correct, replace the AC adapter.
4. If the voltage is acceptable, do the following:
 - Replace the system board.
 - If the problem persists, go to “Lenovo Z370/Z470/Z570” on page 27.

Note: Noise from the AC adapter does not always indicate a defect.

Checking operational charging

To check whether the battery charges properly during operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

Perform operational charging. If the battery status indicator or icon does not light on, remove the battery pack and let it return to room temperature. Reinstall the battery pack. If the charge indicator or icon is still off, replace the battery pack.

If the charge indicator still does not light on, replace the system board. Then reinstall the battery pack. If it is still not charged, go to the next section.

Checking the battery pack

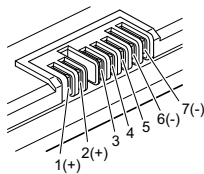
Battery charging does not start until the Power Meter shows that less than 95% of the total power remains; under this condition the battery pack can charge to 100% of its capacity. This protects the battery pack from being overcharged or from having a shortened life.

To check your battery, move your cursor to the Power Meter icon in the icon tray of the Windows® taskbar and wait for a moment (but do not click it), and the percentage of battery power remaining is displayed. To get detailed information about the battery, double-click the Power Meter icon.

Note: If the battery pack becomes hot, it may not be able to be charged. Remove it from the computer and leave it at room temperature for a while. After it cools down, reinstall and recharge it.

To check the battery pack, follow the steps below:

- 1. Turn off the computer.
- 2. Remove the battery pack and measure the voltage between battery terminals 1 (+) and 7 (-). See the following figure:



Terminal	Voltage (V DC)
1	+0 to +14
7	Ground (-)

- 3. If the voltage is less than +11.0 V DC, the battery pack has been discharged.
Note: Recharging will be continued for at least 3 hours, even though the indicator does not light on.
If the voltage is still less than +11.0 V DC after recharging, replace the battery.
- 4. If the voltage is more than +11.0 V DC, measure the resistance between battery terminals 5 and 7. The resistance must be 4 to 30 KΩ.
If the resistance is not correct, replace the battery pack. If the resistance is correct, replace the system board.

Related service information

This chapter presents the following information:

- “Restoring the factory contents by using Recovery Disc Set” on page 23
- “Passwords” on page 24
- “Power management” on page 25

Restoring the factory contents by using Recovery Disc Set

When the hard disk drive or solid state drive is replaced because of a failure, no product recovery program is on the new drive. In this case, you must use the *Recovery Disc Set* for the computer. Order the *Recovery Disc Set* and the drive at the same time so that you can recover the new drive with the pre-installed software when they arrive.

The *Recovery Disc Set* consists of the following set of DVDs to restore the computer to the original factory configuration.

Start Recovery Disc (one disc)

This disc is used to format the hard disk drive and initiate the recovery process.

Operating System Recovery Disc (one or more discs)

This disc restores the Microsoft Windows operating system.

Applications and Drivers Recovery Disc (one or more discs)

This disc restores the pre-installed applications and drivers on the computer.

Supplemental Recovery Disc

This disc contains additional content, such as software for specific models and updates to the software that was preloaded on the computer. Not all recovery disc sets come with a *Supplemental Recovery Disc*.

To restore the computer to the original factory configuration using the recovery disc set, do the following:

1. Insert the bootable *Start Recovery Disc* into the optical drive.
2. Start the computer. When the Lenovo logo comes up, immediately press F12; on the boot sequence menu, select the optical drive as the first boot-up device. The computer will boot from the *Start Recovery Disc*. Follow the on-screen instructions to begin the recovery process.
3. Read the license. If you agree with the terms, select **I accept these terms and conditions** and then click **Next**.
4. Insert the **Operating System Recovery Disc** when prompted and click **Yes** to begin the operating system recovery process.
5. Insert the *Applications and Drivers Recovery Disc* when prompted and then click **OK** to begin the applications and drivers recovery process.
6. If you have a *Supplemental Recovery Disc*, insert it when prompted and click **Yes**. If you do not have a *Supplemental Recovery Disc*, click **No**.

7. When all of the data has been copied from the last disc in the set, remove the disc and restart the computer.

Note: The remainder of the recovery process is fully automated and no action is required by you. The computer will restart into the Windows desktop several times and you might experience periods when no activity is apparent on the screen for several minutes at a time. This is normal.

8. When the recovery process is complete, the Welcome to the Microsoft Windows screen is displayed. Follow the instructions on the screen to complete the Windows setup.

Passwords

As many as three passwords may be needed for any Lenovo computer: the power-on password (POP), the hard disk password (HDP), and the supervisor password (SVP).

If any of these passwords has been set, a prompt for it appears on the screen whenever the computer is turned on. The computer does not start until the password is entered.

Exception: If only an SVP is installed, the password prompt does not appear when the operating system is booted.

Power-on password

A power-on password (POP) protects the system from being powered on by an unauthorized person. The password must be entered before an operating system can be booted.

Hard-disk password

There are two hard-disk passwords (HDPs):

+ User HDP - for the user

+ Master HDP - for the system administrator, who can use it to get access to the hard disk drive even if the user has changed the user HDP

Attention: If the user HDP has been forgotten, check whether a master HDP has been set. If it has, it can be used for access to the hard disk drive. If no master HDP is available, neither Lenovo nor Lenovo authorized service technicians provide any services to reset either the user or the master HDP, or to recover data from the hard disk drive. The hard disk drive can be replaced for a scheduled fee.

Supervisor password

A supervisor password (SVP) protects the system information stored in the BIOS Setup Utility. The user must enter the SVP in order to get access to the BIOS Setup Utility and change the system configuration.

Attention: If the SVP has been forgotten and cannot be made available to the servicer, there is no service procedure to reset the password. The system board must be replaced for a scheduled fee.

Power management

Note: Power management modes are not supported for APM operating system.

To reduce power consumption, the computer has three power management modes: screen blank, sleep (standby), and hibernation.

Screen blank mode

If the time set on the “Turn off monitor” timer in the operating system expires, the LCD backlight turns off. You can also turn off the LCD backlight by pressing Fn+F2.

To end screen blank mode and resume normal operation, press any key.

Sleep (standby) mode

When the computer enters sleep (standby) mode, the following events occur in addition to what occurs in screen blank mode:

- The LCD is powered off.
- The hard disk drive is powered off.
- The CPU stops.

To enter sleep (standby) mode, press Fn+F1.

In certain circumstances, the computer goes into sleep (standby) mode automatically:

- If a “suspend time” has been set on the timer, and the user does not do any operation with the keyboard, the hard disk, the parallel connector, or the diskette drive within that time.
- If the battery indicator is amber, indicating that the battery power is low. (Alternatively, if **Hibernate when battery becomes low** has been selected in the “Power Management Properties” window, the computer goes into hibernation mode.)

To cause the computer to return from sleep (standby) mode and resume the operation, do one of the following:

- Press the Fn key.
- Open the lid.
- Turn on the power switch.

Also, in the following event, the computer automatically returns from sleep (standby) mode and resumes the operation:

- The time set on the resume timer elapses.

Note: The computer does not accept any input immediately after it enters sleep (standby) mode. Wait a few seconds before taking any action to reenter operation mode.

Hibernation mode

In hibernation mode, the following occurs:

- The system status, RAM, VRAM, and setup data are stored on the hard disk.
- The system is powered off.

To cause the computer to enter hibernation mode, follow the steps below:

- If you are using the ACPI operating system and have defined one of the following actions as the event that causes the system to go into hibernation mode, perform that action:
 - Closing the lid.
 - Pressing the power button.

Also, the computer goes into hibernation mode automatically in either of the following conditions:

- If a “hibernation time” has been set on the timer, and if the user does not do any operation with the keyboard, the hard disk drive, the parallel connector, or the diskette drive within that time.
- If the timer conditions are satisfied in suspend mode.

When the power is turned on, the computer returns from hibernation mode and resumes operation. The hibernation file in the boot record on the hard disk drive is read, and system status is restored from the hard disk drive.

Lenovo Z370/Z470/Z570

This chapter presents the following product-specific service references and product-specific parts information:

- “Specifications” on page 27
- “Status indicators” on page 29
- “FRU tests” on page 31
- “Fn key combinations” on page 31
- “FRU replacement notices” on page 32
- “Removing and replacing an FRU” on page 33
- “Locations” on page 85
- “Parts list” on page 88

Specifications

The following table lists the specifications of the Lenovo Z370/Z470/Z570:

Table 1. Specifications

Feature	Description
Processor	• Intel Sandy Bridge
Core Chipset	• Cougar Point
Bus architecture	• DDR3: 800, 1066, 1333MT/s for for Dual Core CPU • DDR3: 800, 1066, 1333MT/s for Quad Core CPU • DMI X4, 2.5Gb/s • FDI 8 lanes (2channels), 2.7Gb/s • PCI Express
Graphic Chipset	• Intel integrated • N12M-GS (Z370) • N12P-GV/GV1, N12P-GE, Radeon™ HD 6560M, Radeon™ Dual HD 6570M (Z470) • N12P-GV, ATI Seymour XT/Whistler LP(Z570)
Display	• 13.3 HD LED Panel, Flat type, 1366x768 pixels, 220 nit (Z370) • 14.0 HD LED Panel, Flat type, 1366x768 pixels, 220 nit (Z470) • 15.6 HD LED Panel, Flat type, 1366x768 pixels, 220 nit (Z570)
Standard memory	• DDR3 1066/1333 SODIMM (x2), Support Dual Channel
CMOS RAM	• 256 bytes
Hard disk drive	• 2.5" SATA 250GB/320GB/500GB/750GB/1TB (5400rpm) • 2.5" SATA 250GB/320GB/500GB/750GB/1TB (7200rpm)
Optical drive	• RAMBO/Blu-ray combo/Blu-ray Rambo

Table 1. Specifications (continued)

Feature	Description
I/O port	• External monitor connector • Stereo headphone jack • Microphone jack • RJ45 x 1 • HDMI port (Select models only) • USB 2.0 x 2 + USB 2.0&e-SATA COMBO x 1 (Select models only) • 5-in-1 memory card reader
MODEM slot	• N/A
Audio	• 1/8" Stereo Headphone Output Jack • 1/8" Microphone Input Combo Jack • Built-in stereo speakers • Built-in microphone
Video	• CRT port x 1, HDMI port x 1
Ethernet (on the system board)	• 10/100/1000M Ethernet
PCI Express Mini Card slot	• 1 slot for WLAN card (half size) • 1 slot for WWAN card (full size)
WLAN	• Intel 802.11 a/b/g/n & WiMax combo • Broadcom/Atheros b/g/n
WWAN	• design ready
Bluetooth wireless	• BT2.1 + EDR CyberTan/USI module
Keyboard	• Numeric
Touch pad	• Two clicks with Dome
Integrated camera	• 0.3/2.0M pixels
Battery	• 48WH, 6 cell cylindrical Li-ion Battery
AC adapter	• 65W/90W
Pre-installed operating system	• Win 7 (Home Basic/Premium/Professional /Ultimate X86/X64; Starter EM X86)

Status indicators

The system status indicators below show the computer status:

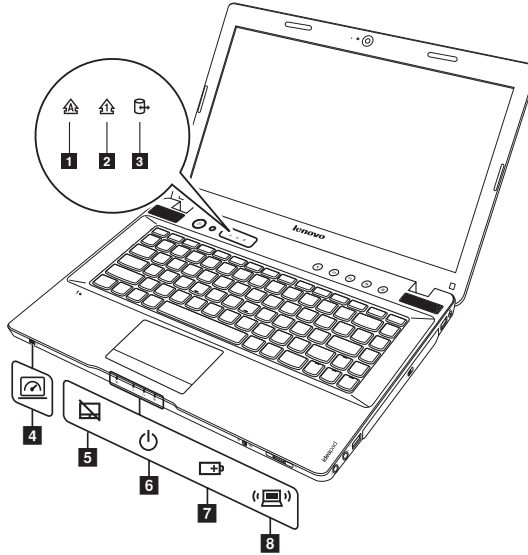


Table 2. Status indicators

Indicator	Meaning
1 Caps lock 	White: Caps Lock mode is enabled. You can enter all alphabetic characters (A-Z) in uppercase without pressing the Shift key. To enable or disable Caps Lock mode, press the CapsLk key.
2 Num lock 	White: The separate numeric keypad on the keyboard is enabled. To enable or disable the numeric keypad, press the Num Lock key.
3 Drive in use 	White: Data is being read from or written to the hard disk drive, or the optical disk drive. When this indicator is on, do not put the computer into standby mode or turn off the computer. Note: Do not move the system while the white drive-in-use light is on. Sudden physical shock could cause drive errors.
4 GPU switch indicator 	White: GPU switching is enabled.
5 Touchpad indicator 	White: The touchpad is disabled.
6 Power on 	White: System is enabled. Blinking white: System is in sleep mode. off: System is in hibernate mode or shut down.
7 Battery status 	Blinking amber: (500ms off/1s on) The remaining power of the battery is less than 5% of its capacity. Blinking amber: (100ms off/3.2s on) The battery is being charged with the remaining power between 5% and 20% of its capacity. Amber: The computer is operating on battery power with the remaining power between 5% and 20% of its capacity. Blinking white: The battery is being charged with the remaining power between 20% and 80% of its capacity. White: The remaining power of the battery is more than 80% of its capacity, or the computer is operating on battery power with the remaining power between 20% and 80% of its capacity.
8 Wireless status 	White: The wireless LAN radio is turned on and connected to AP. Blinking white: The wireless LAN is switched on and the radio of it is also turned off, or the wireless LAN radio is turned on and not connected to AP. Flashing white: The wireless LAN radio is turned on and data is being transmitted. Off: The wireless LAN is switched off and the radio of it is also turned off.

Fn key combinations

The following table shows the function of each combination of Fn with a function key.

Table 4. Fn key combinations

Key combination	Description
Fn + Esc:	Turn on/off the integrated camera.
Fn + F1:	Enter sleep mode.
Fn + F2:	Turn on/off the backlight of the LCD screen.
Fn + F3:	Open the interface for the display device switch to select this notebook or an external display.
Fn + F4:	Open the interface for display resolution settings.
Fn + F5:	Open the interface for integrated wireless devices settings (On/Off).
Fn + F6:	Enable/Disable the touchpad.
Fn + F8 (Z370/Z470):	Enable/Disable the numeric keypad.
Fn + F9:	Start/Pause playback of Windows Media Player.
Fn + F10:	Stop playback of Windows Media Player.
Fn + F11:	Skip to the previous track.
Fn + F12:	Skip to the next track.
Fn + Insert (Z570):	Enable/Disable the scroll lock.
Fn + PgUp (Z370/Z470):	
Fn + PrtSc:	Activate the system request.
Fn + Home:	Activate the pause function.
Fn + End:	Activate the break function.
Fn + PgDn (Z370/Z470):	Activate the insert function.
Fn + ↑/↓:	Increase/Decrease display brightness.
Fn + →/←:	Increase/Decrease sound volume.

FRU replacement notices

This section presents notices related to removing and replacing parts. Read this section carefully before replacing any FRU.

Screw notices

Loose screws can cause a reliability problem. In the Lenovo computer, this problem is addressed with special nylon-coated screws that have the following characteristics:

- They maintain tight connections.
- They do not easily come loose, even with shock or vibration.
- They are harder to tighten.
- Each one should be used only once.

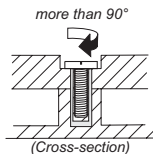
Do the following when you service this machine:

- Keep the screw kit in your tool bag.
- Always use new screws.
- Use a torque screwdriver if you have one.

Tighten screws as follows:

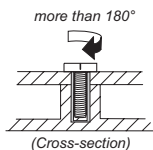
- **Plastic to plastic**

Turn an additional 90° after the screw head touches the surface of the plastic part:



- **Logic card to plastic**

Turn an additional 180° after the screw head touches the surface of the logic card:



- **Torque driver**

If you have a torque screwdriver, refer to the "Torque" column for each step.

- Make sure that you use the correct screws. If you have a torque screwdriver, tighten all screws firmly to the torque shown in the table. **Never use a screw that you removed. Use a new one. Make sure that all screws are tightened firmly.**
- Ensure torque screwdrivers are calibrated correctly following country specifications.

Removing and replacing an FRU

This section presents exploded figures with the instructions to indicate how to remove and replace the FRU. Make sure to observe the following general rules:

1. Do not attempt to service any computer unless you have been trained and certified. An untrained person runs the risk of damaging parts.
2. Before replacing any FRU, review “FRU replacement notices” on page 32.
3. Begin by removing any FRUs that have to be removed before the failing FRU. Any of such FRUs are listed at the top of the page. Remove them in the order in which they are listed.
4. Follow the correct sequence in the steps to remove the FRU, as given in the figures by the numbers in square callouts.
5. When turning a screw to replace an FRU, turn it in the direction as given by the arrow in the figure.
6. When removing the FRU, move it in the direction as given by the arrow in the figure.
7. To put the new FRU in place, reverse the removal procedures and follow any of the notes that pertain to replacement. For information about connecting and arranging internal cables, see “Locations” on page 85.
8. When replacing an FRU, use the correct screw as shown in the procedures.

DANGER

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any of the interconnecting cables.

Attention: After replacing an FRU, do not turn on the computer until you have made sure that all screws, springs, and other small parts are in place and none are loose inside the computer. Verify this by shaking the computer gently and listening for rattling sounds. Metallic parts or metal flakes can cause electrical short circuits.

Attention: The system board is sensitive to, and can be damaged by, electrostatic discharge. Before touching it, establish personal grounding by touching a ground point with one hand or using an electrostatic discharge (ESD) strap (P/N 6405959) to remove potential shock reasons.

Note:

The illustrations used in this section are of the Lenovo Z470, unless otherwise stated.

1010 Battery pack

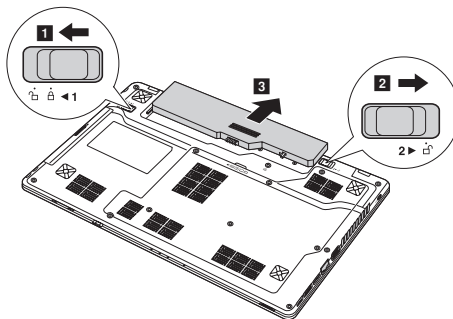
⚠ DANGER

Only use the battery specified in the parts list for your computer. Any other battery could ignite or explode.

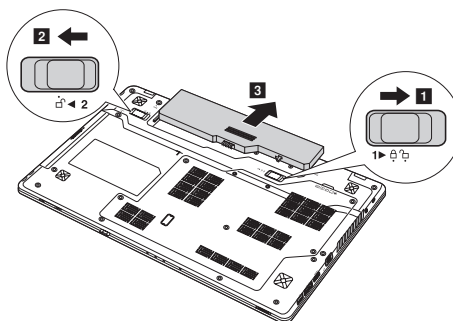
Figure 1. Removal steps of battery pack

Unlock the manual battery latch **1**. Holding the spring-loaded battery latch in the unlocked position **2**, remove the battery pack in the direction shown by the arrow **3**.

Z370/Z470



Z570



When installing: Install the battery pack along the slide rails of the slot. Then make sure that the battery release lever is in the locked position.

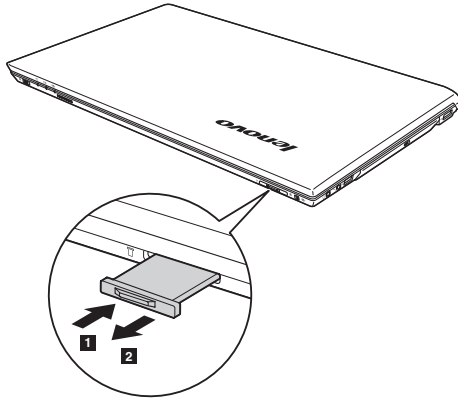
1020 Dummy card

For access, remove this FRU:

- “1010 Battery pack” on page 34

Figure 2. Removal steps of dummy cards

Remove the dummy card in the direction shown by arrows **1** **2**.



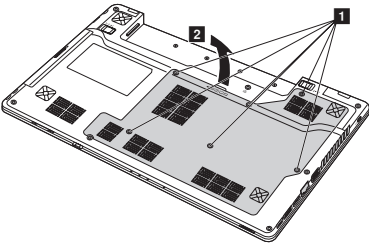
1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover

For access, remove this FRU:

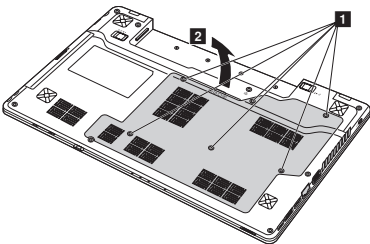
- “1010 Battery pack” on page 34

Figure 3. Removal steps of HDD/Memory/Mini PCI Express Card slot compartment cover

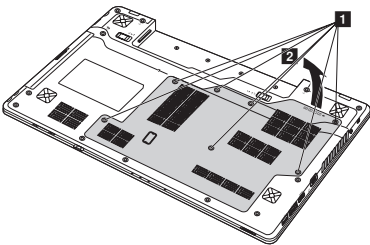
Z370: Loosen six screws **1**, then remove the compartment cover **2**.



Z470: Loosen six screws **1**, then remove the compartment cover **2**.



Z570: Loosen seven screws **1**, then remove the compartment cover **2**.



Step	Screw (quantity)	Color	Torque
1	Z370: M2 × 4 mm, mm, flat-head, nylok-coated (6)	Black	2.0 kgfcm
	Z470: M2.5 × 5 mm, mm, flat-head, nylok-coated (6)	Black	2.5 kgfcm
	Z570: M2 × 4 mm, mm, flat-head, nylok-coated (7)	Black	1.6 kgfcm

1040 Hard disk drive

For access, remove these FRUs in order:

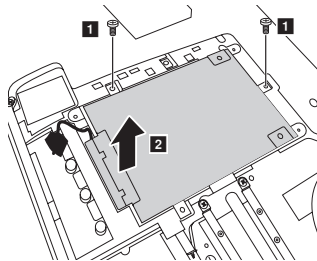
- “1010 Battery pack” on page 34
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36

Attention:

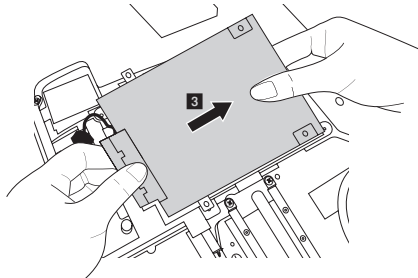
- **Do not drop the hard disk drive or apply any physical shock to it.**
The hard disk drive is sensitive to physical shock. Improper handling can cause damages and permanent loss of data.
- Before removing the drive, suggest the customer to backup all the information on it if possible.
- Never remove the drive while the system is operating or is in suspend mode.

Figure 4. Removal steps of hard disk drive

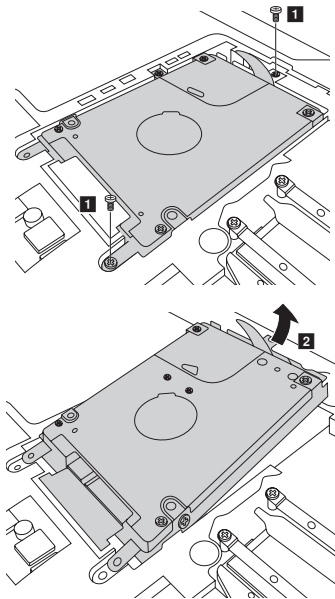
Z370: Remove two screws **1**, then carefully remove the hard disk drive (secured in the metal frame) from the compartment in the direction shown by arrow **2**.



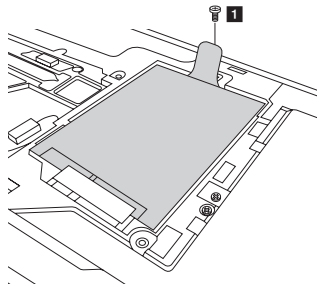
Hold the SATA receptacle connector with one hand and pull the hard disk drive (secured in the metal frame) in the direction shown below to detach the connectors **3**.

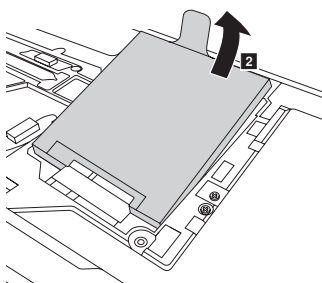


Z470: Remove two screws **1**, lift the hard disk drive, and then pull the tab in the direction shown by arrow **2** to remove the hard disk drive from the slot.



Z570: Remove the screw **1**, then pull the tab in the direction shown by arrow **2** to remove the hard disk drive from the slot.





Step	Screw (quantity)	Color	Torque
1	Z370: M2 × 3 mm, flat-head, nylok-coated (2)	Black	2.0 kgfcm
	Z470: M2.5 × 3.5 mm, flat-head, nylok-coated (2)	Black	2.5 kgfcm
	Z570: M2 × 2 mm, flat-head, nylok-coated (1)	Black	1.6 kgfcm

When installing: Make sure that the HDD connector is attached firmly.

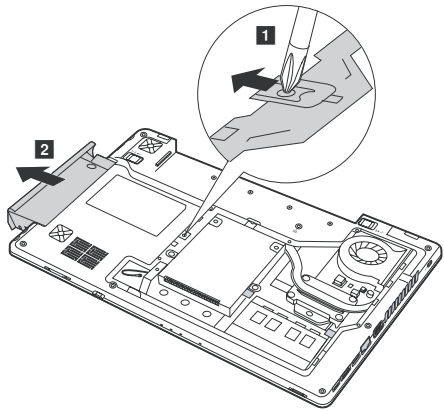
1050 Optical drive

For access, remove this FRU:

- “1010 Battery pack” on page 34

Figure 5. Removal steps of optical drive

Remove the screw shown in the illustration **1**. Gently pull the optical drive out **2**.



Step	Screw (quantity)	Color	Torque
1	Z370: M2 × 3 mm, flat-head, nylok-coated (1)	Black	2.0 kgfcm
	Z470: M2 × 3 mm, flat-head, nylok-coated (1)	Black	2.0 kgfcm
	Z570: M2 × 2.5 mm, flat-head, nylok-coated (1)	Silver	1.6 kgfcm

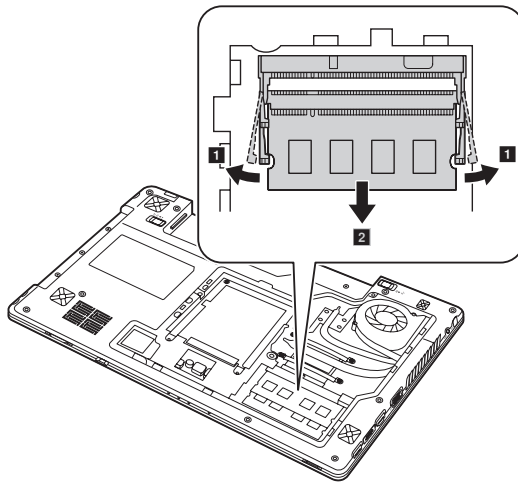
1060 DIMM

For access, remove these FRUs in order:

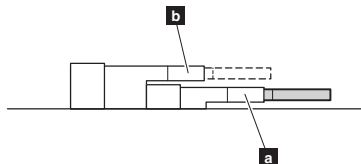
- “1010 Battery pack” on page 34
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36

Figure 6. Removal steps of DIMM

Release the two latches on both edges of the socket at the same time in the direction shown by arrows **1**, and then unplug the DIMM in the direction shown by arrow **2**.



Note: If only one DIMM is used on the computer you are servicing, the card must be installed in SLOT-0 (**a** : lower slot), but not in SLOT-1 (**b** : upper slot).



When installing: Insert the notched end of the DIMM into the socket. Push the DIMM firmly, and pivot it until it snaps into the place. Make sure that it is firmly fixed in the slot and difficult to be moved.

1070 PCI Express Mini Card for wireless LAN/WAN

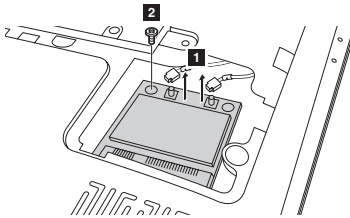
For access, remove these FRUs in order:

- “1010 Battery pack” on page 34
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36

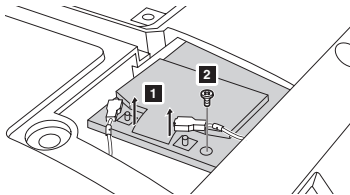
Figure 7. Removal steps of PCI Express Mini Card for wireless LAN/WAN

Disconnect the two wireless LAN cables (black, white) **1**, and then remove the screw **2**.

Z370/Z470



Z570



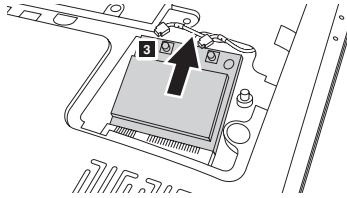
In step **1**, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159), or pick up the connectors with your fingers and gently unplug them in the direction shown by arrows.

Notes: wireless LAN card has 2 cables in step **1**.
wireless LAN card in some models may have 3 cables in step **1**.

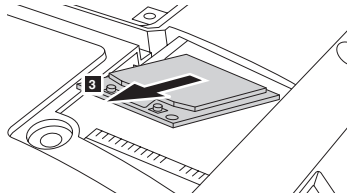
Step	Screw (quantity)	Color	Torque
2	Z370: M2 × 3 mm, flat-head, nylok-coated (1)	Black	2.0 kgfcm
	Z470: M2 × 3 mm, flat-head, nylok-coated (1)	Black	2.0 kgfcm
	Z570: M2 × 4 mm, flat-head, nylok-coated (1)	Silver	1.6 kgfcm

Figure 7. Removal steps of PCI Express Mini Card for wireless LAN/WAN (continued)
Remove the card in the direction shown by arrow **3**.

Z370/Z470



Z570



When installing:

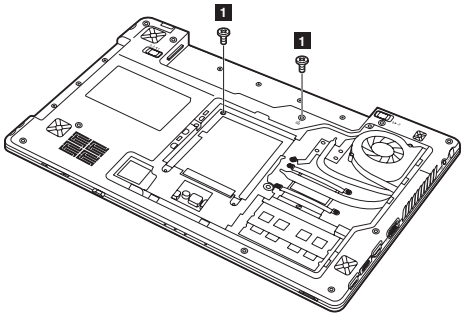
- In models with a wireless LAN card that has two antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **1**, and the white cable (2nd) (AUX) into jack labeled **2** on the card.
- In models with a wireless LAN card that has three antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **1**, the grey cable (3rd) into jack labeled **3**, and the white cable (2nd) (AUX) into jack labeled **2** on the card.

1080 Keyboard

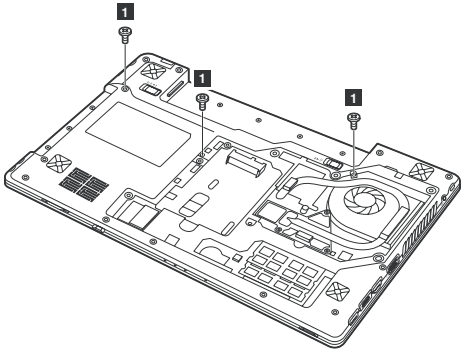
For access, remove this FRU:

- “1010 Battery pack” on page 34

Figure 8. Removal steps of keyboard
Z370/Z470: Remove two screws **1**.



Z570: Remove Three screws **1**.



Step	Screw (quantity)	Color	Torque
1	Z370: M2.5 × 5 mm, flat-head, nylok-coated (2)	Black	2.5 kgfcm
	Z470: M2.5 × 5 mm, flat-head, nylok-coated (2)	Black	2.5 kgfcm
	Z570: M2.5 × 12 mm, flat-head, nylok-coated (3)	Black	3.0 kgfcm

Figure 8. Removal steps of keyboard (continued)

Loosen the keyboard with fingers in the direction shown by arrows **2**.

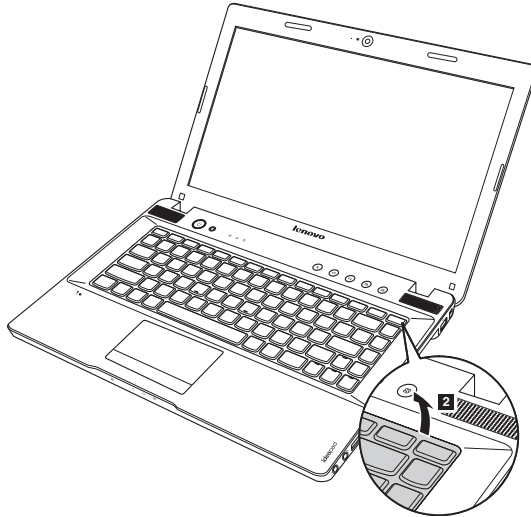
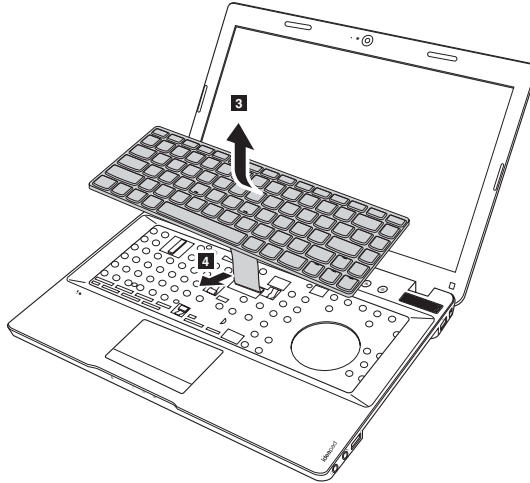


Figure 8. Removal steps of keyboard (continued)

Lift the keyboard a little **3**, and then detach the connector in the direction shown by arrows **4**.



When installing: Make sure that the FPC connector is attached firmly.

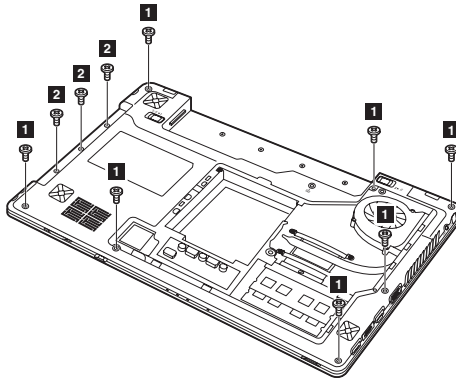
1090 Keyboard bezel

For access, remove these FRUs in order:

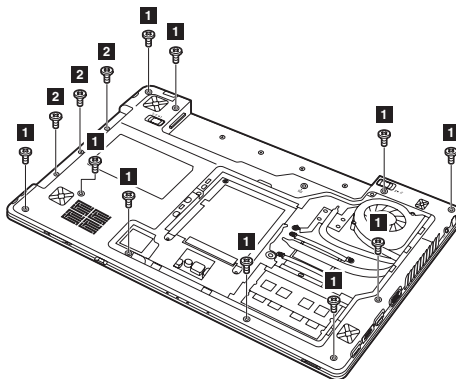
- “1010 Battery pack” on page 34
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36
- “1050 Optical drive” on page 40
- “1080 Keyboard” on page 44

Figure 9. Removal steps of keyboard bezel

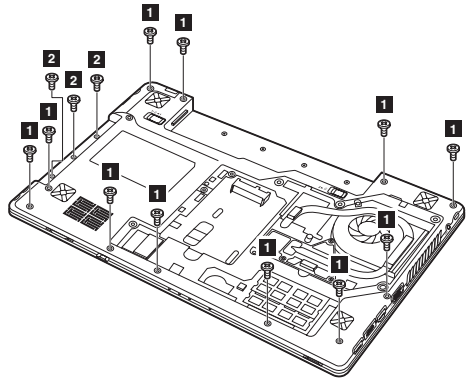
Z370: Remove seven screws **1** and three screws **2** on the bottom.



Z470: Remove ten screws **1** and three screws **2** on the bottom.



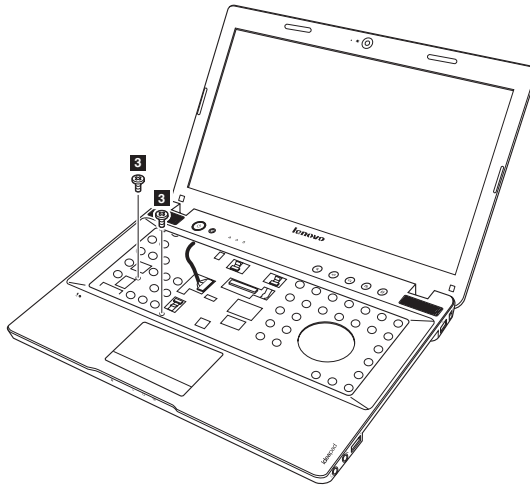
Z570: Remove eleven screws **1** and three screws **2** on the bottom.



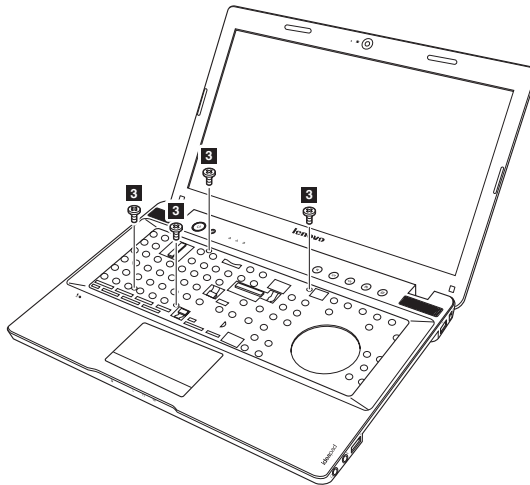
Step	Screw (quantity)	Color	Torque
1	Z370: M2.5 × 5 mm, flat-head, nylok-coated (7)	Black	2.5 kgfcm
	Z470: M2.5 × 5 mm, flat-head, nylok-coated (10)	Black	2.5 kgfcm
	Z570: M2.5 × 7 mm, flat-head, nylok-coated (11)	Black	3.0 kgfcm
2	Z370: M2 × 2 mm, flat-head, nylok-coated (3)	Black	2.0 kgfcm
	Z470: M2 × 2 mm, flat-head, nylok-coated (3)	Black	2.0 kgfcm
	Z570: M2 × 2 mm, flat-head, nylok-coated (3)	Black	1.6 kgfcm

Figure 9. Removal steps of keyboard bezel (continued)

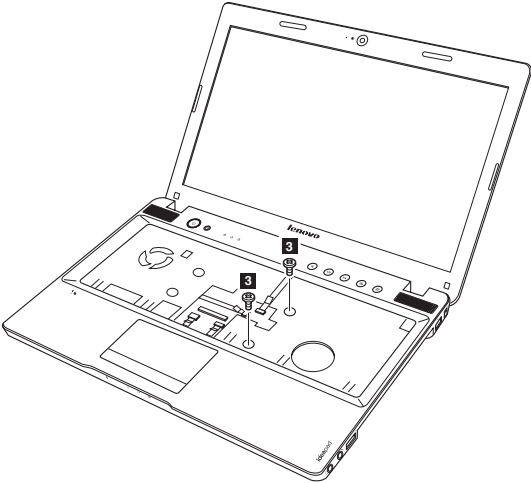
Z370: Remove two screws **3**.



Z470: Remove four screws **3**.



Z570: Remove two screws **3**.

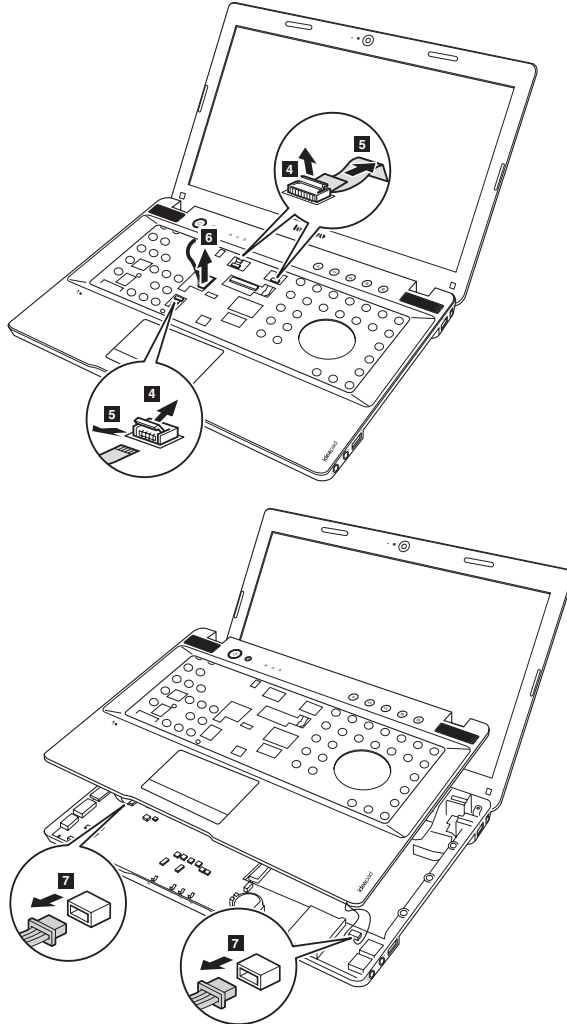


Step	Screw (quantity)	Color	Torque
3	Z370: M2.5 × 5 mm, flat-head, nylok-coated (2)	Black	2.5 kgfcm
	Z470: M2.5 × 5 mm, flat-head, nylok-coated (4)	Black	2.5 kgfcm
	Z570: M2.5 × 7 mm, flat-head, nylok-coated (2)	Black	3.0 kgfcm

Figure 9. Removal steps of keyboard bezel (continued)

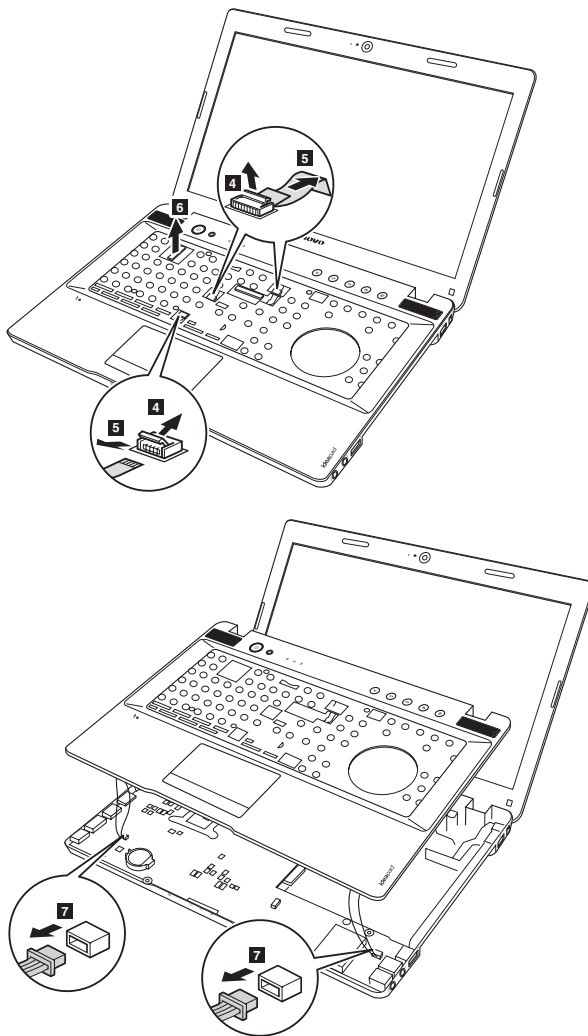
Z370:

Detach three FPC connectors in the direction shown by arrows **4** **5**. Unplug the LCD connector in the direction shown by arrow **6** and two microphone connectors in the direction shown by arrow **7**.



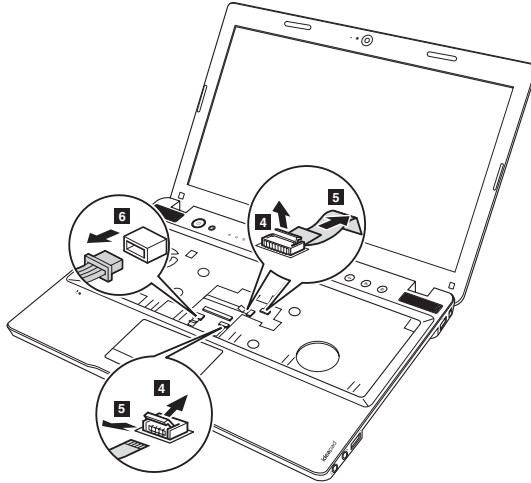
Z470:

Detach three FPC connectors in the direction shown by arrows **4** **5**. Unplug the LCD connector in the direction shown by arrow **6** and two microphone connectors in the direction shown by arrow **7**.



Z570:

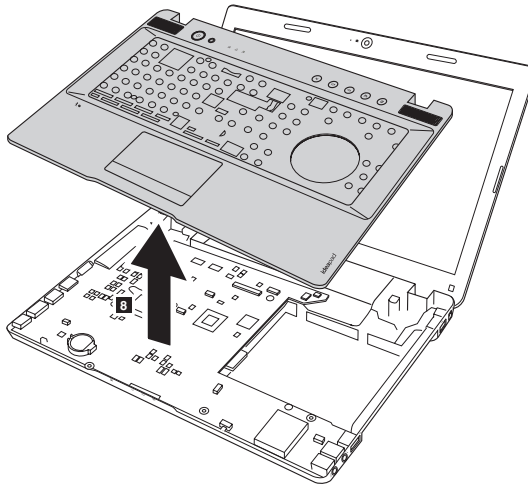
Detach three FPC connectors in the direction shown by arrows **4** **5**. Unplug the microphone connector in the direction shown by arrow **6**.



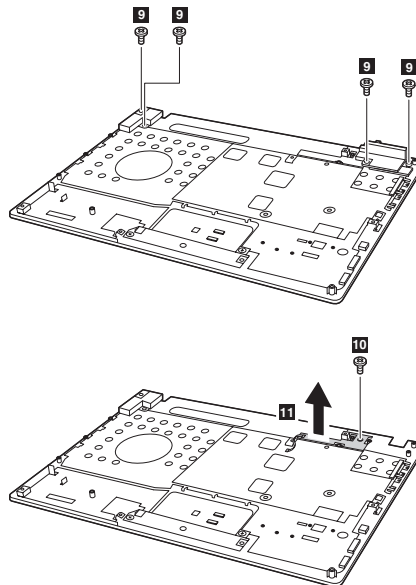
When installing: Make sure that all the FPC connectors, microphone connectors and LCD connector are attached firmly.

Figure 9. Removal steps of keyboard bezel (continued)

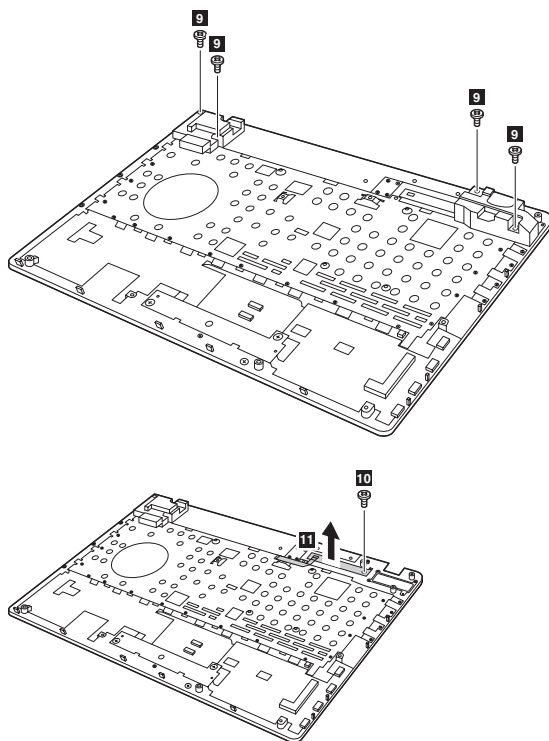
Remove the keyboard bezel in the direction shown by arrow **8**.



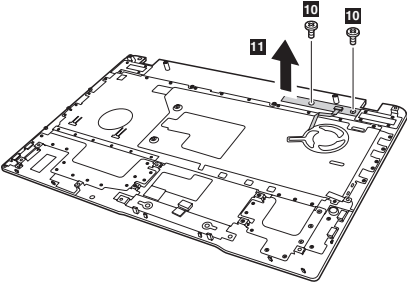
Z370: Loosen four screws **9** to remove the speakers, then loosen the screw **10** to remove the power board **11**.



Z470: Loosen four screws **9** to remove the speakers, then loosen the screw **10**, and pull the power board right to remove it **11**.



Z570: Loosen two screws **10**, and then remove the power board **11**.



Step	Screw (quantity)	Color	Torque
9	Z370: M2 × 2.65 mm, flat-head, nylok-coated (4)	Black	2.0 kgfcm
	Z470: M2 × 2.5 mm, flat-head, nylok-coated (4)	Silver	2.0 kgfcm
10	Z370: M2 × 2 mm, flat-head, nylok-coated (1)	Black	2.0 kgfcm
	Z470: M2.5 × 3.5 mm, flat-head, nylok-coated (1)	Black	2.0 kgfcm
	Z570: M2 × 2.5 mm, flat-head, nylok-coated (2)	Black	1.6 kgfcm

1100 System board

Important notices for handling the system board:

When handling the system board, bear the following in mind.

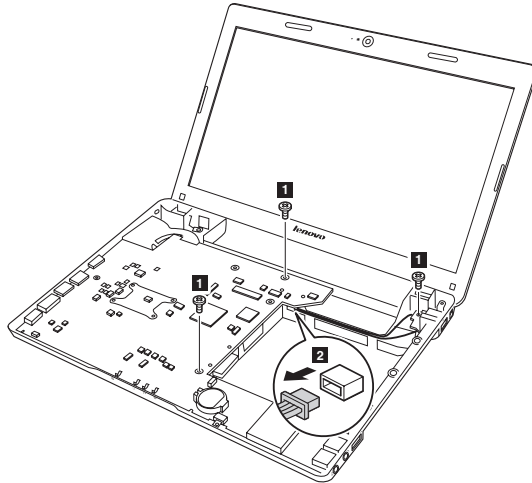
- Be careful not to drop the system board on a bench top that has a hard surface, such as metal, wood, or composite.
- Avoid rough handling of any kind.
- In the whole process, make sure not to drop or stack the system board.
- If you put a system board down, make sure to put it only on a padded surface such as an ESD mat or conductive corrugated material.

For access, remove these FRUs in order:

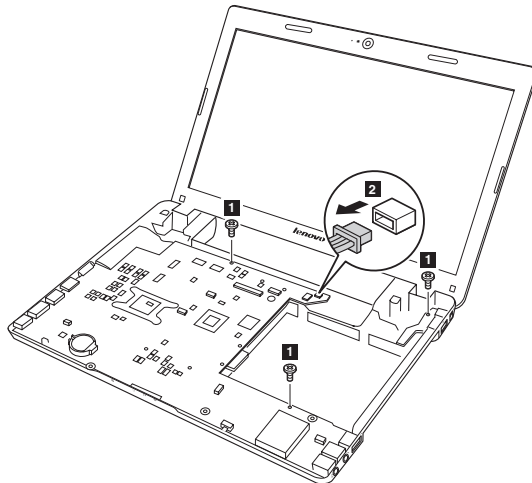
- “1010 Battery pack” on page 34
- “1020 Dummy card” on page 35
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36
- “1040 Hard disk drive” on page 37
- “1050 Optical drive” on page 40
- “1060 DIMM” on page 41
- “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47

Figure 10. Removal steps of system board

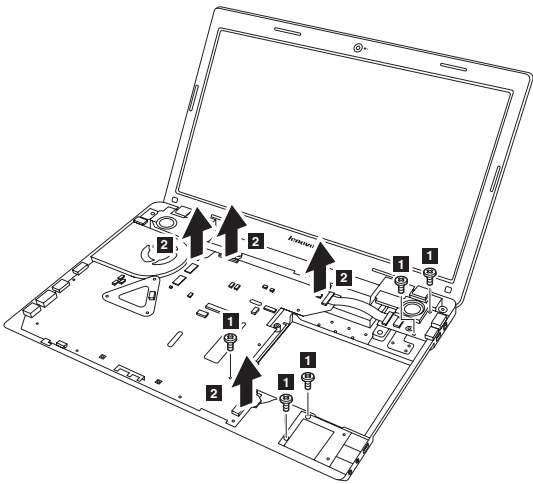
Z370: Remove three screws **1**. Unplug the microphone connector in the direction shown by arrow **2**.



Z470: Remove three screws **1**. Unplug the microphone connector in the direction shown by arrow **2**.



Z570: Remove five screws **1**. Unplug four microphone connectors in the direction shown by arrow **2**.

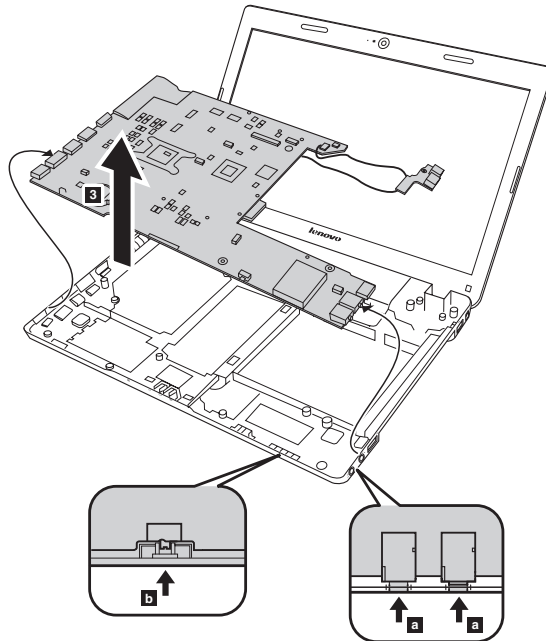


When installing: Make sure that all the connectors are attached firmly.

Step	Screw (quantity)	Color	Torque
1	Z370: M2 × 3 mm, flat-head, nylok-coated (3)	Black	2.5 kgfcm
	Z470: M2.5 × 5 mm, flat-head, nylok-coated (3)	Black	2.5 kgfcm
	Z570: M2 × 7 mm, flat-head, nylok-coated (5)	Black	3.0 kgfcm

Figure 10. Removal steps of system board (continued)

Remove the system board in the direction shown by arrow **3**.



When installing: When attaching the system board to the base cover, adjust the placement of the wireless radio switch as shown in **b**, and make sure that both of the audio jack and the microphone jack are attached to the holes on the base cover as shown in **a**. Improper placement of the switch or those jacks might cause a damage.

1110 LCD unit

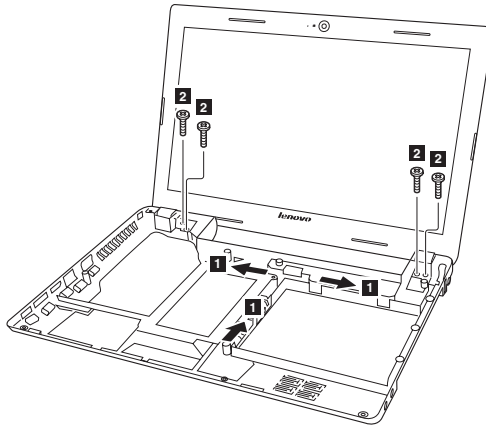
For access, remove these FRUs in order:

- “1010 Battery pack” on page 34
- “1020 Dummy card” on page 35
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36
- “1040 Hard disk drive” on page 37
- “1050 Optical drive” on page 40
- “1060 DIMM” on page 41
- “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1100 System board” on page 57

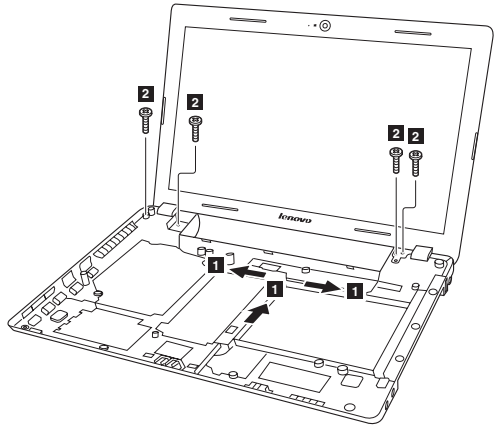
Figure 11. Removal steps of LCD unit

Release the antenna cables from the cable guides in the direction shown by arrows **1**. Remove four screws **2**.

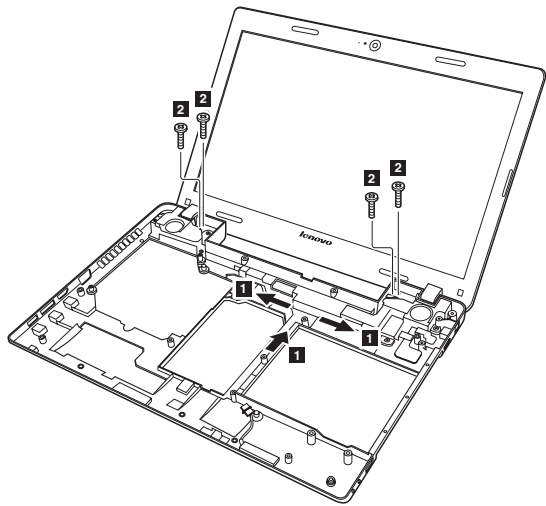
Z370:



Z470:



Z570:



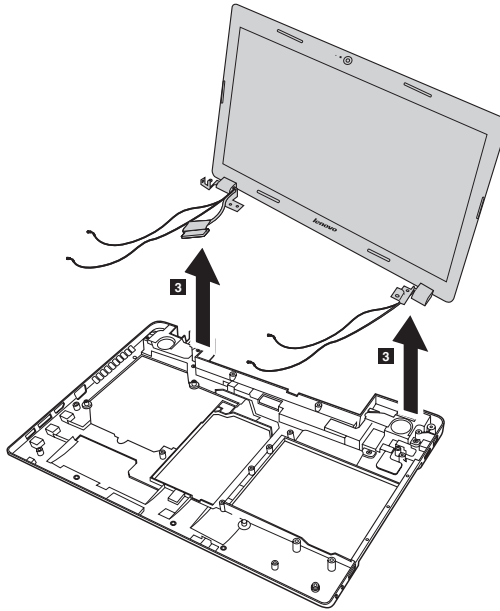
Step	Screw (quantity)	Color	Torque
2	Z370: M2 × 5 mm, flat-head, nylok-coated (4)	Silver	2.0 kgfcm
	Z470: M2 × 5 mm, flat-head, nylok-coated (4)	Silver	2.0 kgfcm
	Z570: M2.5 × 4 mm, flat-head, nylok-coated (4)	Silver	3.0 kgfcm

When installing:

- Route the antenna cables along the cable guides. As you route the cables, make sure that they are not subjected to any tension. Tension could cause the cables to be damaged by the cable guides, or a wire to be broken.
- Make sure that the LCD connector is attached firmly and make sure that you do not pinch the antenna cables when you attach the LCD assembly. Route the LCD cable along the cable guides.

Figure 11. Removal steps of LCD unit (continued)

Remove the LCD unit in the direction shown by arrows **3**.



1120 Fan assembly and Heat Sink assembly

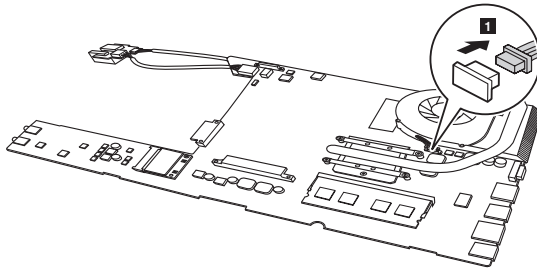
For access, remove these FRUs in order:

- "1010 Battery pack" on page 34
- "1020 Dummy card" on page 35
- "1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover" on page 36
- "1040 Hard disk drive" on page 37
- "1050 Optical drive" on page 40
- "1060 DIMM" on page 41
- "1070 PCI Express Mini Card for wireless LAN/WAN" on page 42
- "1080 Keyboard" on page 44
- "1090 Keyboard bezel" on page 47
- "1100 System board" on page 57

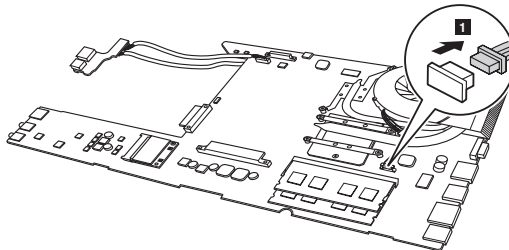
Figure 12. Removal steps of fan assembly and heat sink assembly

Detach the fan connector in the direction shown by arrow **1**.

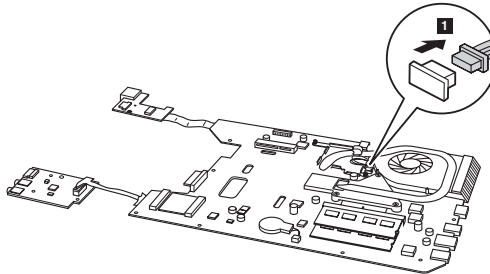
Z370



Z470



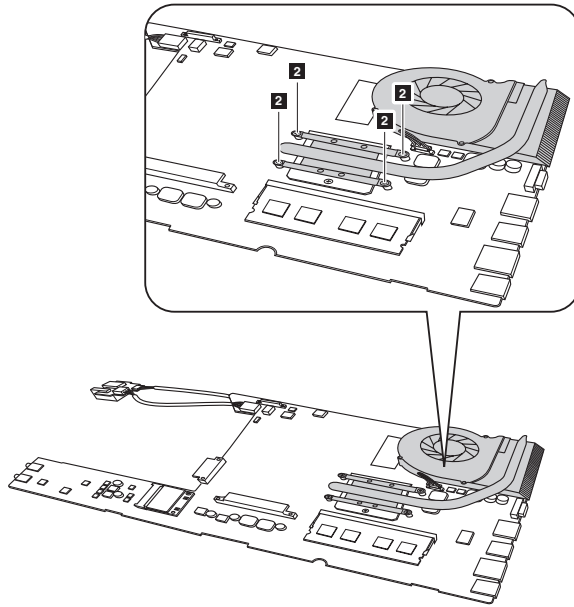
Z570



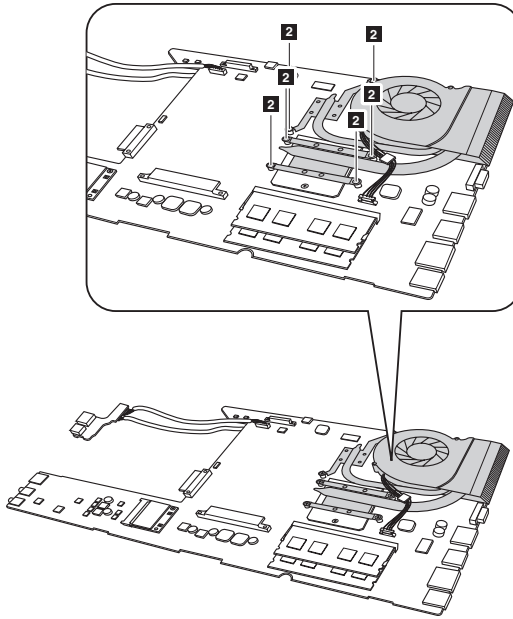
When installing: Make sure that the fan connector is attached firmly to the system board.

Figure 12. Removal steps of fan assembly and heat sink assembly (continued)

Z370: Loosen four screws **2**.



Z470: Loosen six screws **2**.



Z570: Loosen five screws **2**.

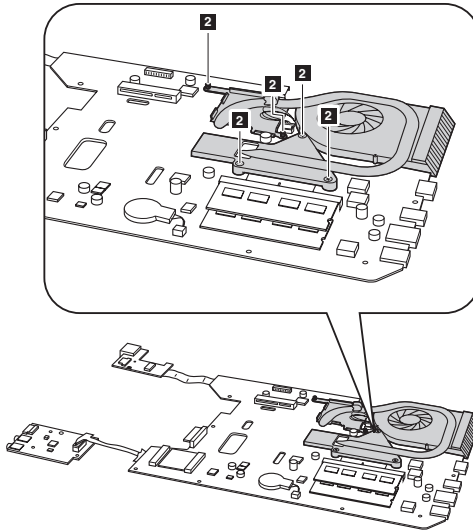
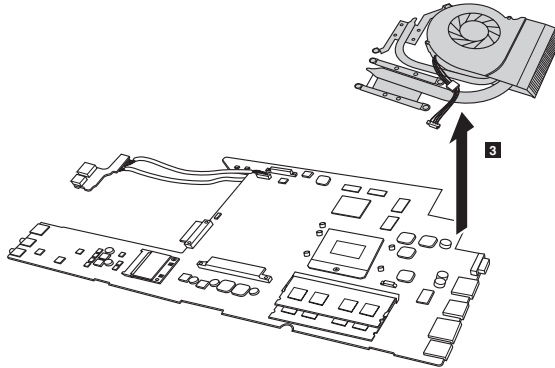


Figure 12. Removal steps of fan assembly and heat sink assembly (continued)

Lift the fan assembly and heat sink assembly in the direction shown by arrow

3. Be careful not to damage the connector.



1130 CPU

For access, remove these FRUs in order:

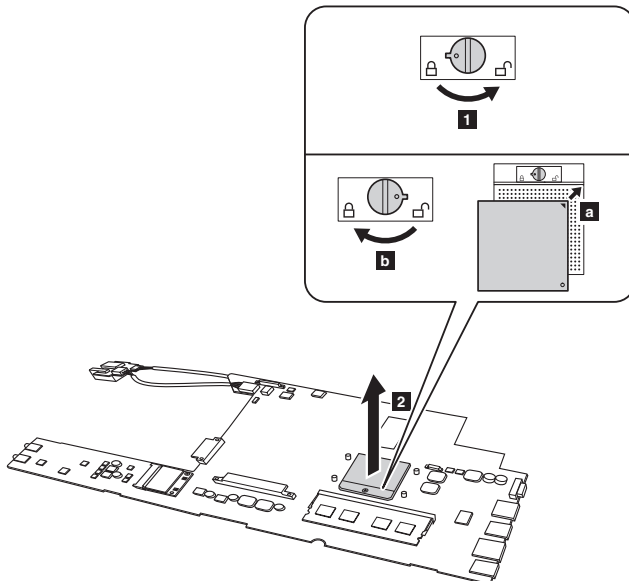
- “1010 Battery pack” on page 34
- “1020 Dummy card” on page 35
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36
- “1040 Hard disk drive” on page 37
- “1050 Optical drive” on page 40
- “1060 DIMM” on page 41
- “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1100 System board” on page 57
- “1120 Fan assembly and Heat Sink assembly” on page 65

Attention: CPU is extremely sensitive. When you service the CPU, avoid any kind of rough handling.

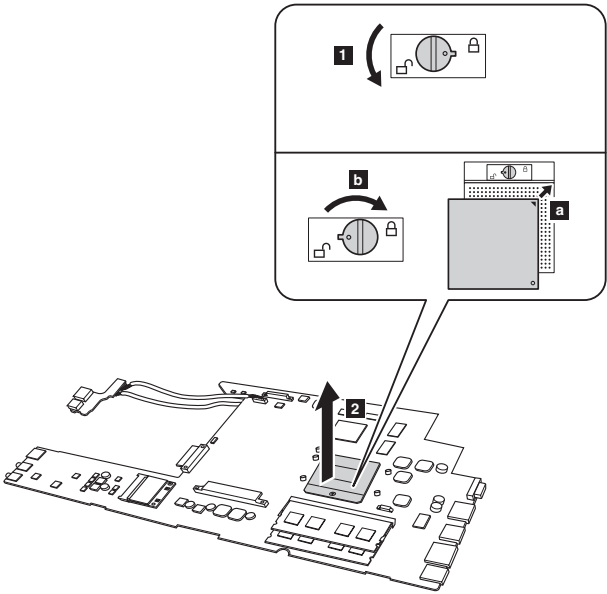
Figure 13. Removal steps of CPU

Rotate the head of the screw in the direction shown by arrow **1** to release the lock, then remove the CPU in the direction shown by arrow **2**.

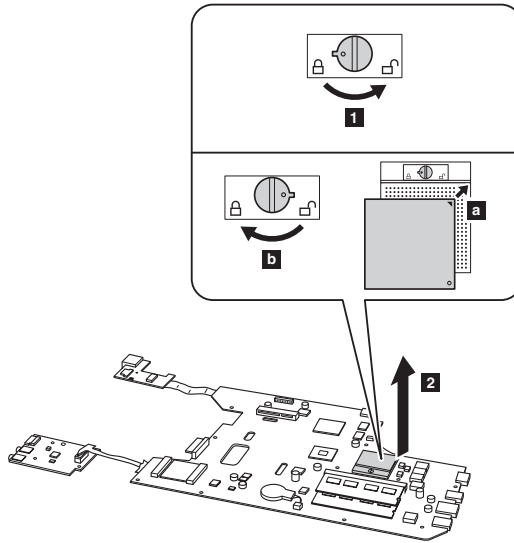
Z370



Z470



Z570



When installing: Place the CPU on the CPU socket in the direction shown by arrow **a**, and then rotate the head of the screw in the direction shown by arrow **b** to secure the CPU.

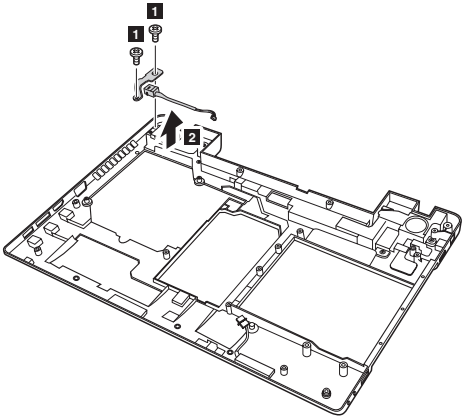
1140 Base cover, speakers and bluetooth card

For access, remove these FRUs in order:

- “1010 Battery pack” on page 34
- “1020 Dummy card” on page 35
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36
- “1040 Hard disk drive” on page 37
- “1050 Optical drive” on page 40
- “1060 DIMM” on page 41
- “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1110 LCD unit” on page 61
- “1100 System board” on page 57

Figure 14. Removal steps of base cover, speakers and bluetooth card

Z570: Remove two screws **1** and then remove the power assembly in the direction shown by arrow **2**.

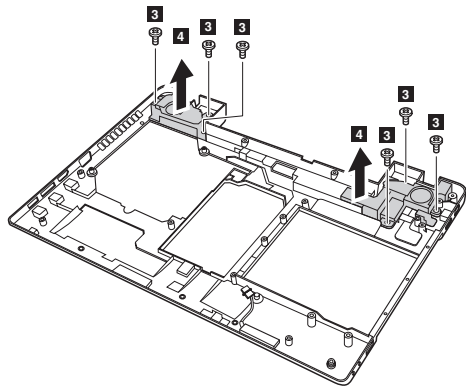


When installing: Make sure that the power connector is attached firmly.

Step	Screw (quantity)	Color	Torque
1	M2 × 2.5 mm, flat-head, nylok-coated (2)	Black	1.6 kgfcm

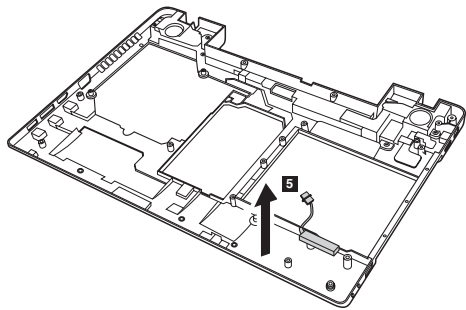
Figure 14. Removal steps of base cover, speakers and bluetooth card (continued)

Z570: Remove six screws **3**, and then remove the speakers in the direction shown by arrows **4**.



Step	Screw (quantity)	Color	Torque
3	M2.5 × 2.5 mm, flat-head, nylok-coated (6)	Black	3.0 kgfcm

Remove the bluetooth card in the direction shown by arrow **5**.



Note: Applying labels to the base cover

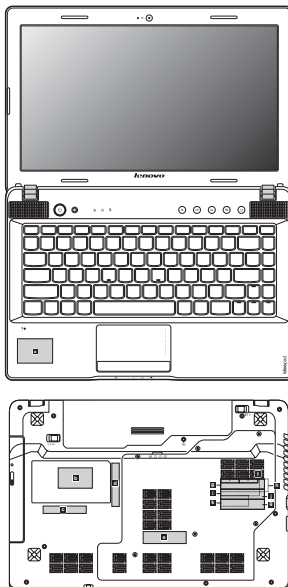
The new base cover FRU is shipped with a kit containing labels of several kinds. When you replace the base cover, you need to apply the following label:

The following labels need to be peeled off from the old base cover, and need to be put on the new base cover.

- a** Palmrst Label
- b** Rating Label
- c** COA Label
- d** Wistron Label
- e** PRC/MTM Label
- f** Malaysia SIRIM Label
- g** Brazil Label (WLAN) or WLAN Label for US/CA/TW or Israel LBL for WLAN
- h** PPT Label
- i** Indonesia WLAN&BT LBL
- j** Brazil Label (BT) or BT Label for US/CA/TW
- k** Indonesia D side Label

For some models, you also need to apply one or two FCC labels. Check the old base cover; if it has one or two FCC labels, find duplicates of them in the label kit and apply them to the new base cover.

For the location of each label, refer to the following figure:



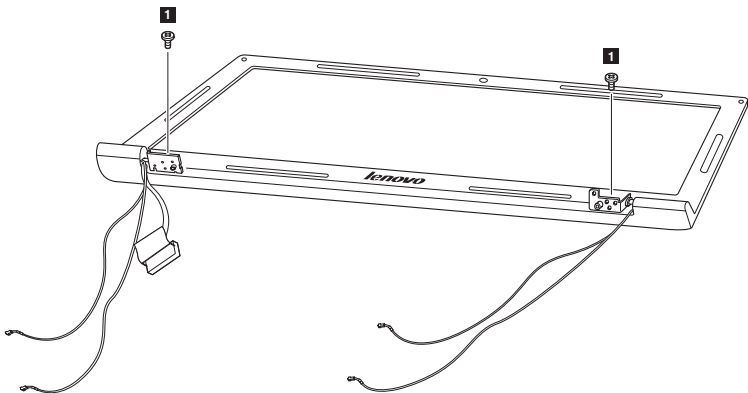
1150 LCD front bezel

For access, remove these FRUs in order:

- “1010 Battery pack” on page 34
- “1020 Dummy card” on page 35
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36
- “1040 Hard disk drive” on page 37
- “1050 Optical drive” on page 40
- “1060 DIMM” on page 41
- “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1100 System board” on page 57
- “1110 LCD unit” on page 61

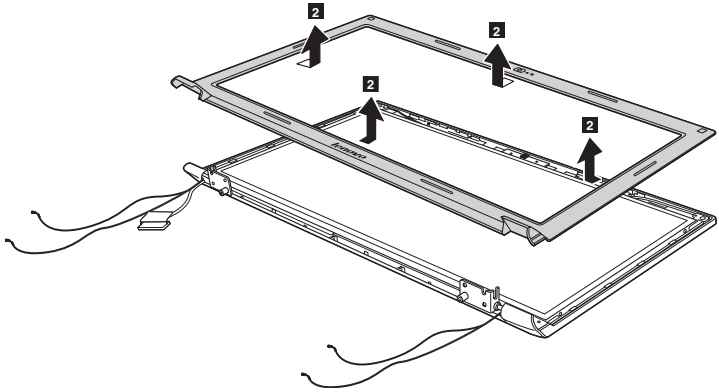
Figure 15. Removal steps of LCD front bezel

Remove two screws **1**.



Step	Screw (quantity)	Color	Torque
1	M2.0 × 4 mm, flat-head, nylok-coated (2)	Black	2.0 kgfcm

Remove the LCD front bezel in the direction shown by arrows **2**.



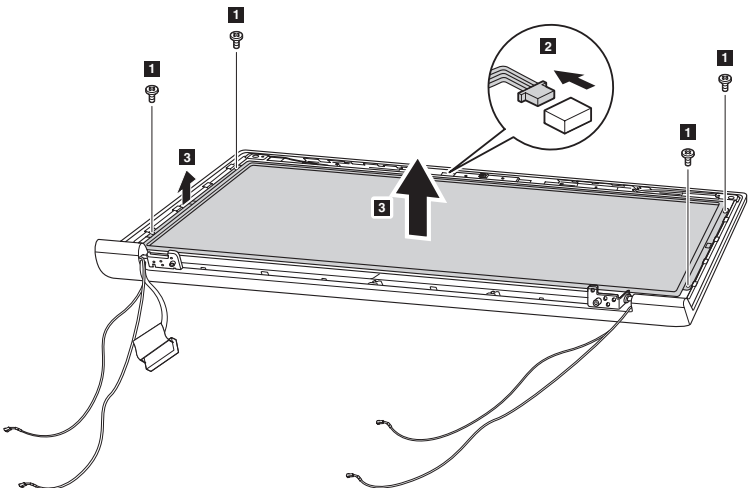
1160 LCD panel, LCD cable and hinges

For access, remove these FRUs in order:

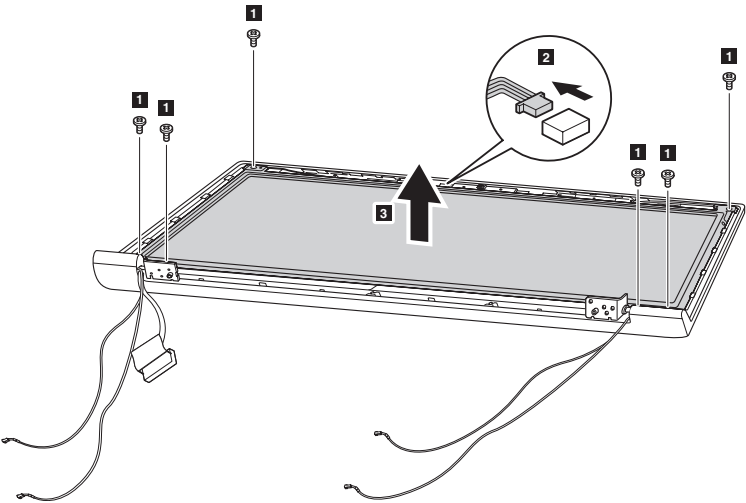
- “1010 Battery pack” on page 34
- “1020 Dummy card” on page 35
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36
- “1040 Hard disk drive” on page 37
- “1050 Optical drive” on page 40
- “1060 DIMM” on page 41
- “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1100 System board” on page 57
- “1110 LCD unit” on page 61
- “1150 LCD front bezel” on page 77

Figure 16. Removal steps of LCD panel, LCD cable and hinges

Z370: Remove four screws **1**. Unplug the integrated camera connector in the direction shown by arrow **2**. Lift the LCD panel in the direction shown by arrows **3**.



Z470/Z570: Remove six screws **1**. Remove the integrated camera connector in the direction shown by arrow **2**. Lift the LCD panel with the hinges in the direction shown by arrows **3**.

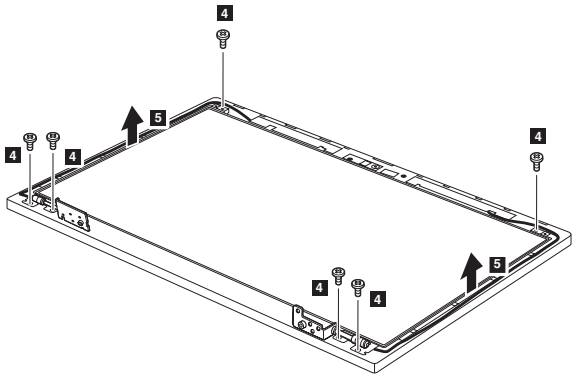


When installing: Make sure that the connector is attached firmly.

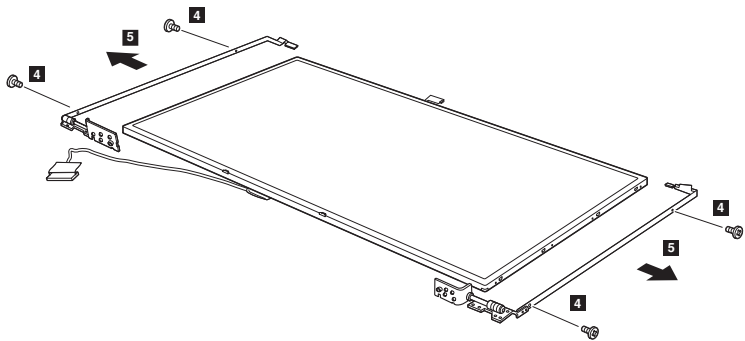
Step	Screw (quantity)	Color	Torque
1	Z370: M1.7 × 3 mm, flat-head, nylok-coated (4)	Silver	1.5 kgfcm
	Z470: M2.5 × 3.5 mm, flat-head, nylok-coated (6)	Silver	2.5 kgfcm
	Z570: M2.5 × 4 mm, flat-head, nylok-coated (6)	Silver	3.0 kgfcm

Figure 16. Removal steps of LCD panel, LCD cable and hinges (continued)

Z370: Remove six screws **4**, then remove the hinges in the direction shown by arrows **5**.



Z470/Z570: Remove four screws **4** and remove the hinges in the direction shown by arrows **5**.

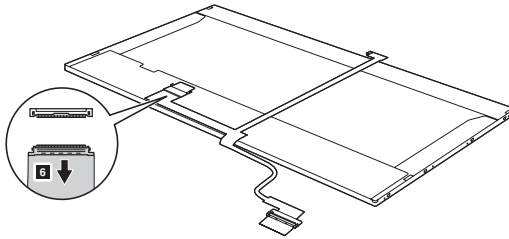


Step	Screw (quantity)	Color	Torque
4	Z370: M2.5 × 3 mm, flat-head, nylok-coated (6)	Black	2.5 kgfcm
	Z470: M2.5 × 5 mm, flat-head, nylok-coated (4)	Black	2.5 kgfcm
	Z570: M2.5 × 3 mm, flat-head, nylok-coated (4)	Black	3.0 kgfcm

Figure 16. Removal steps of LCD panel, LCD cable and hinges (continued)

Note: The LCD cables are attached to the LCD panel by a metal connector.

Peel off the adhesive tape and detach the connector in the direction shown by arrow **6**.



When installing: Make sure that the metal connector is attached firmly.

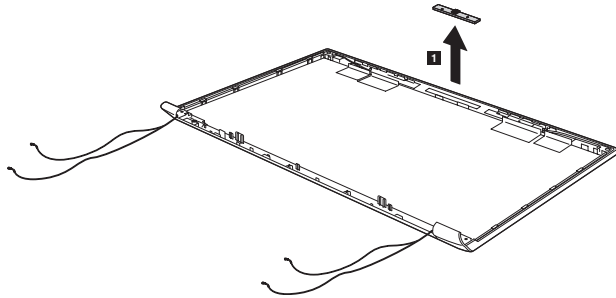
1170 Integrated camera

For access, remove these FRUs in order:

- “1010 Battery pack” on page 34
- “1020 Dummy card” on page 35
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36
- “1040 Hard disk drive” on page 37
- “1050 Optical drive” on page 40
- “1060 DIMM” on page 41
- “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1100 System board” on page 57
- “1110 LCD unit” on page 61
- “1150 LCD front bezel” on page 77
- “1160 LCD panel, LCD cable and hinges” on page 79

Figure 17. Removal steps of integrated camera

Note: The integrated camera is stuck on the top center of the LCD cover. Remove the integrated camera from the LCD cover **1**.



When installing: Stick the integrated camera to the top center of the LCD cover and adjust the placement of it to make sure the connector is attached firmly.

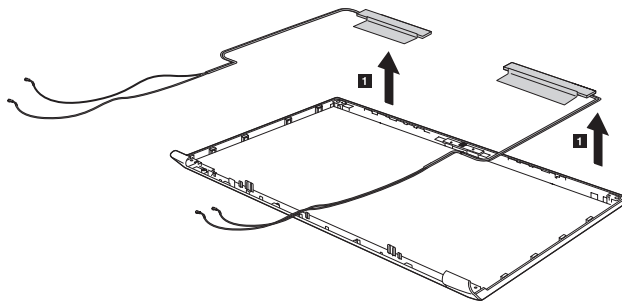
1180 Antenna assembly and LCD cover

For access, remove these FRUs in order:

- “1010 Battery pack” on page 34
- “1020 Dummy card” on page 35
- “1030 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 36
- “1040 Hard disk drive” on page 37
- “1050 Optical drive” on page 40
- “1060 DIMM” on page 41
- “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1100 System board” on page 57
- “1110 LCD unit” on page 61
- “1150 LCD front bezel” on page 77
- “1160 LCD panel, LCD cable and hinges” on page 79

Figure 18. Removal steps of antenna assembly and LCD cover

Peel off the adhesive tapes securing the antenna boards, release the cables from the cable guide, and then remove the antenna assembly in the direction shown by arrows **1**.

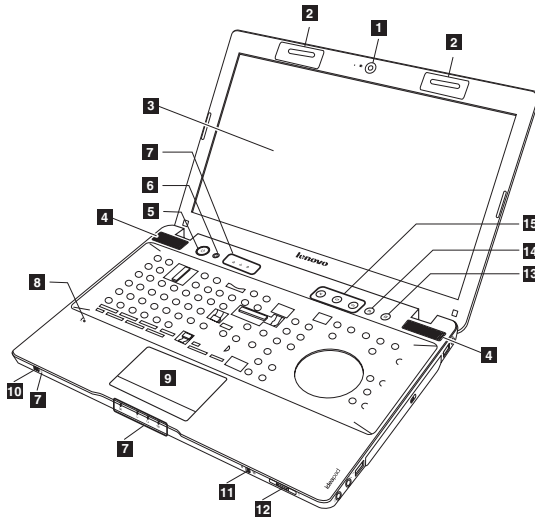


When installing: Route the antenna cables along the cable guides and secure the antenna boards with adhesive tapes. As you route the cables, make sure that they are not subjected to any tension. Tension could cause the cables to be damaged by the cable guides, or a wire to be broken.

Locations

Front view

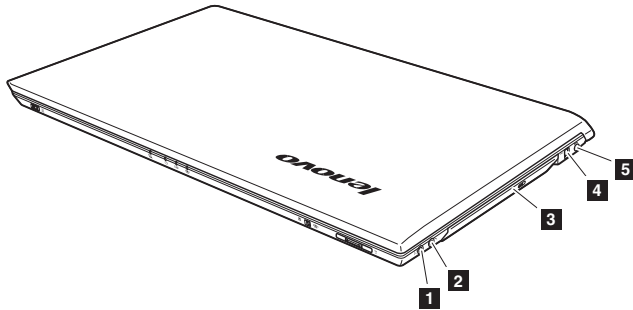
- 1** Integrated camera (Select models only)
 - 2** Wireless module antennas (Select models only)
 - 3** Computer display
 - 4** Speaker
 - 5** Power button
 - 6** OneKey Rescue System button
 - 7** System status indicators
 - 8** Built-in microphone
 - 9** Touchpad
 - 10** GPU (Graphics Processing Unit) switch (Select models only)
 - 11** Integrated wireless device switch (Select models only)
- Note:** For the description of each indicator, see “Status indicators” on page 29.
- 12** Memory card slot
 - 13** Thermal management button
 - 14** OneKey Theater button
 - 15** Volume buttons



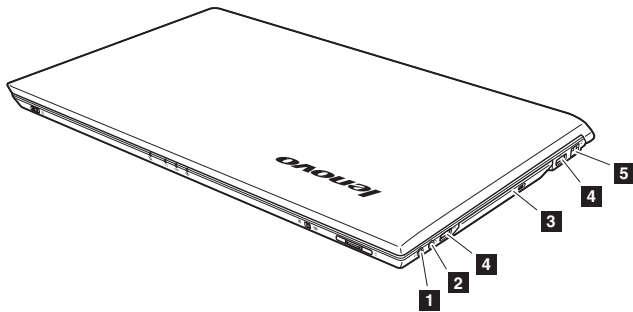
Right-side view

- 1** Headphone jack
- 2** Microphone jack
- 3** Optical drive
- 4** USB port
- 5** AC power adapter jack
- 6** RJ-45 port

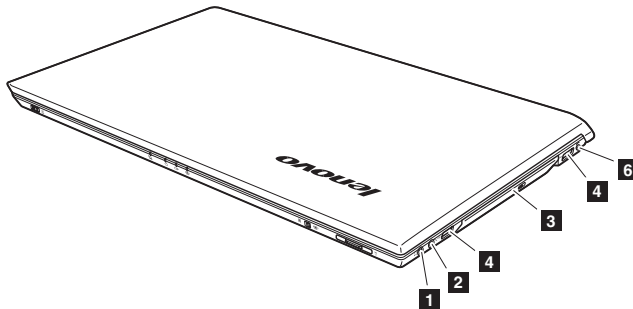
Z370:



Z470:



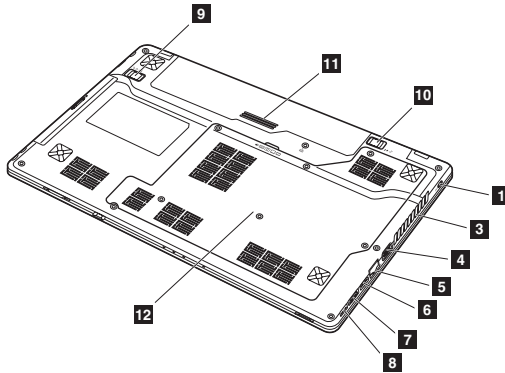
Z570:



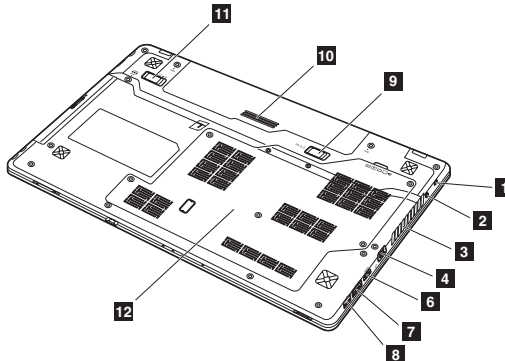
Bottom and Left-side view

- 1** Kensington slot
- 2** AC power adapter jack
- 3** Fan louvers
- 4** VGA port
- 5** RJ-45 port
- 6** HDMI port (Select models only)
- 7** eSATA/USB combo port (Select models only)
- 8** USB Port
- 9** Battery latch - manual
- 10** Battery pack
- 11** Battery latch - spring loaded
- 12** Hard disk drive (HDD)/Memory/Mini PCI Express Card slot compartment

Z370/Z470:



Z570:



Parts list

This section presents the following service parts:

- “Overall” on page 89
- “LCD FRUs” on page 95
- “Keyboard” on page 98
- “Miscellaneous parts” on page 110
- “AC adapters” on page 111
- “Power cords” on page 112

Notes:

- Each FRU is available for all types or models, unless specific types or models are specified.

Overall

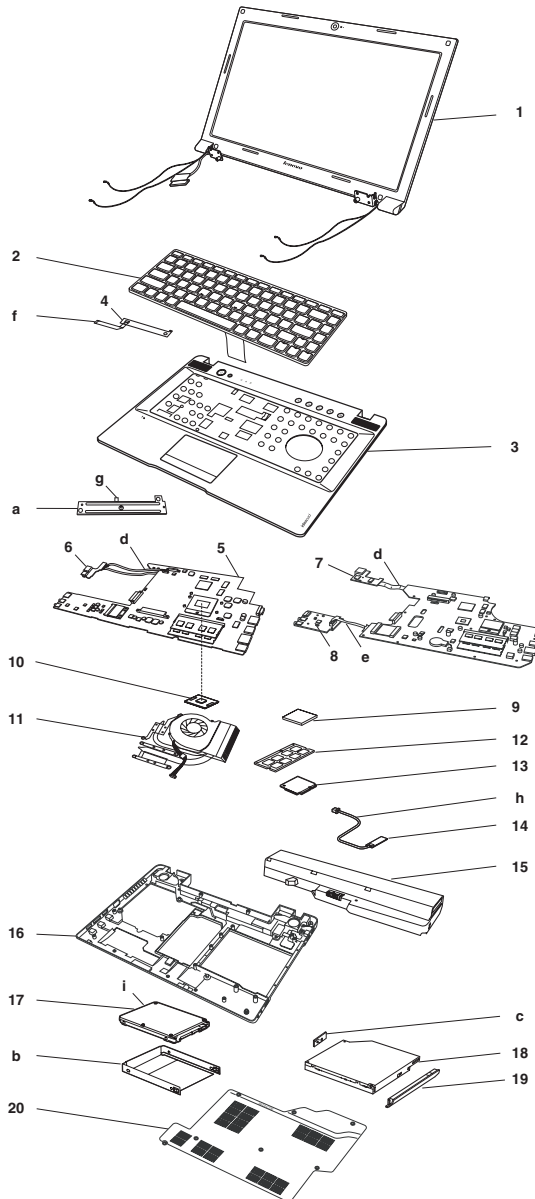


Table 5. Parts list—Overall

No.	FRU	FRU no.	CRU ID
1	LCD unit (see “LCD FRUs” on page 95.)		
2	Keyboard (see “Keyboard” on page 98.)		
3	KL5 TOP CASE ASSY-BLUE (Z370)	31049407	N
3	KL5 TOP CASE ASSY METAL (Z370)	31049408	N
3	KL5 TOP CASE ASSY-PINK (Z370)	31049409	N
3	KL6 TOP CASE ASSY-BLUE (Z470)	31049436	N
3	KL6 TOP CASE ASSY-GREY AL (Z470)	31049437	N
3	KL6 TOP CASE ASSY-PINK (Z470)	31049438	N
3	LZ57 UPPER CASE Grey Metal W/MIC (Z570)	31049313	N
3	LZ57 UPPER CASE Light Blue W/MIC (Z570)	31049786	N
4	LZ57 POWER BOARD (Z570)	11013371	N
5	KL5 MB UMA-LAN100 31KL5MB0020 (Z370)	11013283	N
5	KL5 MB UMA-GLAN 31KL5MB0090 (Z370)	11013284	N
5	Z370 Dis BB Group(512M) 10/100M Lan	TBD	N
5	Z370 Dis BB Group(1G) 10/100M Lan	TBD	N
5	KL6 MB UMA-LAN100-DUAL CORE 31KL6MB0040 (Z470)	11013285	N
5	KL6 MB UMA-LAN100-QUAD CORE 31KL6MB00Z0 (Z470)	11013286	N
5	KL6A MB GV1-H512-LAN100 FOR DUAL CORE (Z470)	11013287	N
5	Z470 QC DIS-GV1 512M MB -10/100M Lan	TBD	N
5	KL6A MB GV1-1G-LAN100 FOR QUAD CORE (Z470)	11013288	N
5	KL6A MB GV1_1G-LAN100 FOR DUAL CORE (Z470)	11013289	N
5	KL6A MB GEOP_1G-LAN100 FOR DUAL CORE (Z470)	11013290	N
5	KL6A MB GEOP_2G-LAN100 FOR DUAL CORE (Z470)	11013291	N
5	KL6A MB GEOP_1G-LAN100 FOR QUAD CORE (Z470)	11013292	N
5	KL6A MB GEOP_2G-LAN100 FOR QUAD CORE (Z470)	11013293	N
5	LZ57 MB DIS N12P-GV1 512M FOR DUAL CORE (Z570)	11013349	N
5	LZ57 MB DIS N12P-GV1 1G FOR DUAL CORE (Z570)	11013350	N
5	LZ57 MB DIS N12P-GE 1G FOR DUAL CORE (Z570)	11013351	N
5	LZ57 MB DIS N12P-GE 2G FOR DUAL CORE (Z570)	11013352	N
5	LZ57 MB UMA FOR DUAL CORE (Z570)	11013353	N
5	LZ57 MB GV1 512M FOR QUAD CORE (Z570)	11013406	N
5	LZ57 MB GV1 1G FOR QUAD CORE (Z570)	11013408	N
5	LZ57 MB GE 1G FOR QUAD CORE (Z570)	11013409	N
5	LZ57 MB GE 2G FOR QUAD CORE (Z570)	11013410	N
5	LZ57 MB UMA FOR QUAD CORE (Z570)	11013411	N
6	KL5 DC IN/USB BOARD ASSY (Z370)	11013382	N
6	KL6 DC IN/USB BOARD ASSY (Z470)	11013383	N
7	LZ57 RJ45/USB BOARD UMA (Z570)	31049291	N

Table 5. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID
7	LZ57 RJ45/USB BOARD DIS (Z570)	31049292	N
8	LZ57 CARD READER BOARD DIS (Z570)	31049293	N
8	LZ57 CARD READER BOARD UMA (Z570)	31049294	N
9	KL5 SD DUMMY CARD (Z370)	31049412	*
9	KL6 SD DUMMY CARD (Z470)	31049442	*
9	LZ57 SD DUMMY CARD (Z570)	31049305	*
10	Intel i7-2820QM 2.30G 8M 4c D2 PGA	102001055	N
10	Intel I7-2720QM 2.20G 6M 4c D2 PGA	102001071	N
10	Intel I7-2630QM 2.0G 6M 4c D2 PGA	102001070	N
10	Intel I7-2620M 2.7G 4M 2c J1 PGA	102001069	N
10	Intel I5-2540M 2.6G 3M 2c J1 PGA	102001068	N
10	Intel I5-2520M 2.5G 3M 2c J1 PGA	102001067	N
10	Intel I5-2410M 2.3G 3M 2c J1 PGA	102001066	N
10	Intel I3-2310M 2.1G 3M 2c J1 PGA	102001065	N
11	KL5 THERMAL MODULE ASSY 35W UMA (Z370)	31049406	N
11	Z370 Discrete thermal Group	TBD	N
11	KL6 THERMAL MODULE ASSY 35W UMA (Z470)	31049432	N
11	KL6 THERMAL MODULE ASSY 35W DIS (Z470)	31049433	N
11	KL6 THERMAL MODULE ASSY 45W UMA (Z470)	31049434	N
11	KL6 THERMAL MODULE ASSY 45W DIS (Z470)	31049435	N
11	LZ57 HEATSINK DIS W/FAN FOR QUAD CORE (Z570)	31049315	N
11	LZ57 HEATSINK DIS W/FAN FOR DUAL CORE (Z570)	31049316	N
11	LZ57 HEATSINK UMA W/FAN FOR DUAL CORE (Z570)	31049317	N
11	LZ57 HEATSINK UMA W/FAN FOR QUAD CORE (Z570)	31049554	N
12	DDRIII 1333 1GB, M471B2873FHS-CH9 (Rev F/1Gb/46nm)	11011936	**
12	DDRIII 1333 1GB, RMT1910MD66E7F-1333 (V69A/2Gb/50nm)	11012427	**
12	DDRIII 1333 1GB, HMT112S6DFR8C-H9 N0 (Rev Vega/1Gb/44nm)	11012767	**
12	DDRIII 1333 1GB, RMT3010EF48E7W-1333 (Rev.F/1Gb/60nm)	11012634	**
12	DDRIII 1333 1GB, SY321NG08HBF (Vega/1Gb/44nm)	11012810	**
12	DDRIII 1333 2GB, M471B5773CHS-CH9 (Rev C/2Gb/46nm)	11012630	**
12	DDRIII 1333 2GB, EBJ21UE8BFU0-DJ-F (Rev.F/1Gb/60nm)	11012608	**
12	DDRIII 1333 2GB, RMT1950MD58E8F-1333 (V69A/2Gb/50nm)	11012213	**
12	DDRIII 1333 2GB, HMT325S6BFR8C-H9 N0 (Rev Vega/2Gb/44nm)	11012197	**

Table 5. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID
12	DDRIII 1333 2GB, NT2GC64B88B0NS-CG (V69A/2Gb/50nm)	11012761	**
12	DDRIII 1333 2GB, SY321NH08HAF (Vega/2Gb/44nm)	11012809	**
12	DDRIII 1333 4GB, M471B5273CH0-CH9 (Rev C /2Gb/46nm)	11011934	**
12	DDRIII 1333 4GB, HMT351S6BFR8C-H9 N0 (Vega/2Gb/44nm)	11012199	**
12	DDRIII 1333 4GB, MT16jSF51264HZ-1G4D1 (Rev V69A/2Gb/50nm)	11012320	**
13	WLAN card, 802.11a/g/n && 802.16e, Intel 6250NX MOW M PCIE NB HMC	20002321	**
13	WLAN card, 802.11a/g/n && 802.16e, Intel 6250GX MOW M PCIE NB HMC	20002388	**
13	WLAN card, 802.11a/g/n && 802.16e, Intel 6150NX MOW M PCIE NB HMC	20002484	**
13	WLAN card, 802.11a/g/n && 802.16e, Intel 6150GX MOW M PCIE NB HMC	20002529	**
13	WLAN card, 802.11 b/g/n 1*2, Intel 1000N MOW M PCIE NB HMC	20002329	**
13	WLAN card, 802.11 b/g/n 2*2, Cbt BCM43227 MOW M PCIE NB HMC	20002506	**
13	WLAN card, 802.11 b/g/n 2*2, Liteon HB97 MOW M PCIE NB HMC	20002525	**
13	WLAN card, 802.11 b/g/n 1*1, Cbt BCM4313 MOW M PCIE NB HMC	20002505	**
13	WLAN card, 802.11 b/g/n 1*1, Liteon AR9285 HB95 BGN MOW NB	20002357	**
14	Bluetooth card, BT2.1 + EDR, Fcn BCM92070 BT2.1 EDR Flash U NB	20002266	N
14	Bluetooth card, BT2.1 + EDR, USI BCM92070 BT2.1 EDR Flash U NB	20002326	N
15	Battery pack, Sanyo L09S6Y02 3S2P 48Wh	121001091	*
15	Battery pack, LG L09L6Y02 3S2P 48Wh	121001089	*
15	Battery pack, SMP/LG L09M6Y02 3S2P 48Wh	121001094	*
15	Battery pack, Celx/S L10C6Y02 3S2P 48Wh	121001071	*
16	KL5 BOTTOM CASE UMA ASSY (Z370)	31049410	N
16	Z370 D cover Group DIS	TBD	N
16	KL6 BOTTOM CASE UMA ASSY (Z470)	31049439	N
16	KL6 BOTTOM CASE DIS ASSY (Z470)	31049440	N
16	LZ57 LOWER CASE DIS W/SPK&DC-IN CABLE (Z570)	31049310	N
16	LZ57 LOWER CASE UMA W/SPK&DC-IN CABLE (Z570)	31049311	N
17	Hard disk drive, 250G 5400rpm SATA, WD2500BPVT-24ZEST0 5400RPM 250G	16004852	*
17	Hard disk drive, 250G 5400rpm SATA, Hitachi HTS545025B9A300	16004060	*
17	Hard disk drive, 250G 5400rpm SATA, Seagate ST9250315AS	16004186	*
17	Hard disk drive, 250G 5400rpm SATA, Hitachi HTS543225A7A384	16005023	*
17	Hard disk drive, 250G 5400rpm SATA, Seagate ST250LT003 5400RPM 7MM 250G	16005210	*

Table 5. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID
17	Hard disk drive, 250G 5400rpm SATA, Toshiba MK2565GSX 5400RPM 250G	16004641	*
17	Hard disk drive, 320G 5400rpm SATA, WD 4K sector 320GN 5400RPM250G	16004853	*
17	Hard disk drive, 320G 5400rpm SATA, Hitachi HTS545032B9A300	16004059	*
17	Hard disk drive, 320G 5400rpm SATA, Hitachi HTS543232A7A384 5400RPM 320G	16005024	*
17	Hard disk drive, 320G 5400rpm SATA, Seagate ST320LT020 5400RPM 7MM 320G	16005211	*
17	Hard disk drive, 320G 5400rpm SATA, Toshiba MK3265GSX 5400RPM 320G	16004642	*
17	Hard disk drive, 500G 5400rpm SATA, Seagate ST9500325AS 500G 9NB	16004189	*
17	Hard disk drive, 500G 5400rpm SATA, WD5000BPVT-24HXZT1 5400RPM 500G	16004846	*
17	Hard disk drive, 500G 5400rpm SATA, Hitachi HTS545050B9A300 500G 9NB	16004058	*
17	Hard disk drive, 500G 5400rpm SATA,Samsung HM501II	16004765	*
17	Hard disk drive, 640G 5400rpm SATA, WD6400BPVT-24HXZT1	16004847	*
17	Hard disk drive, 640G 5400rpm SATA, Toshiba MK6465GSX	16004644	*
17	Hard disk drive, 640G 5400rpm SATA, Seagate ST9640320AS	16005046	*
17	Hard disk drive, 640G 5400rpm SATA, Samsung HM641JI	16004766	*
17	Hard disk drive, 750G 5400rpm SATA, WD7500BPVT-24HXZT1	16004848	*
17	Hard disk drive, 750G 5400rpm SATA, Seagate ST9750423AS	16005333	*
17	Hard disk drive, 750G 5400rpm SATA, Toshiba MK7575GSX	16005334	*
17	Hard disk drive, 320G 7200rpm SATA, Hitachi HTS725032A9A364	16004530	*
17	Hard disk drive, 320G 7200rpm SATA, Seagate ST9320423AS	16004533	*
17	Hard disk drive, 320G 7200rpm SATA, WD WD3200BEKT 7200RPM 320G	16005212	*
17	Hard disk drive, 320G 7200rpm SATA, Hitachi HTS723232A7A364 7200RPM 320G	16005027	*
17	Hard disk drive, 320G 7200rpm SATA, Seagate ST320LT007 7200RPM 7MM 320G	16005030	*
17	Hard disk drive, 500G 7200rpm SATA, Hitachi HTS725050A9A364 7200RPM500G	16004531	*
17	Hard disk drive, 500G 7200rpm SATA, Seagate ST9500420AS 7200RPM500G 9NB	16004532	*
17	Hard disk drive, 500G 7200rpm SATA, WD5000BEKT-24KA9T0 7200RPM 500G	16004850	*

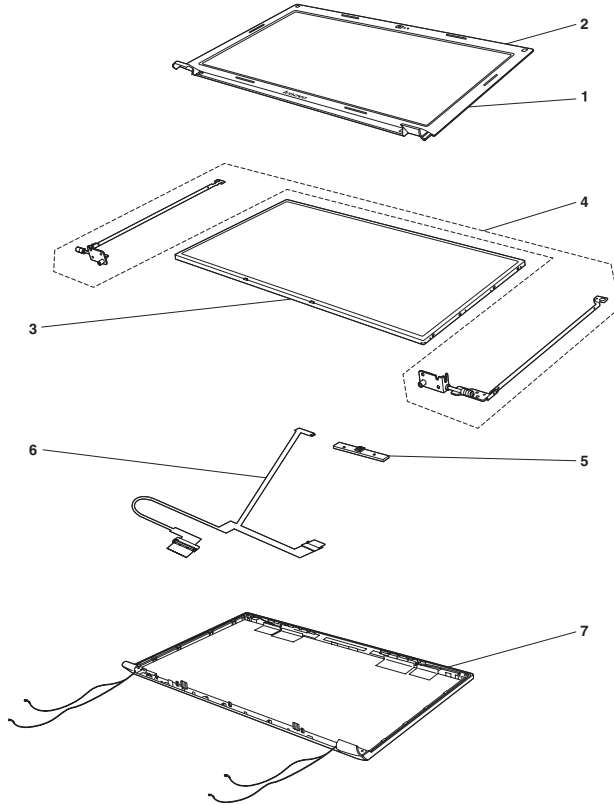
Table 5. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID
18	ODD, 12.7mm Tray Rambo, HLDS GT33N Tray in Rambo	25011474	**
18	ODD, 12.7mm Tray Rambo, PLDS DS-8A5S Tray in Rambo	25011187	**
18	ODD, 12.7mm Tray Rambo, Optiarc AD-7710H Tray in Rambo	25011218	**
18	ODD, 12.7mm Tray Rambo, TSST TS-L633F Tray in Rambo	25011201	**
18	ODD, 12.7mm BD Combo Tray, HLDS CT30N Tray in BD Combo	25011473	**
18	ODD, 12.7mm BD Combo Tray, PLDS DS-6E2SH Tray in BD Combo	25011471	**
18	ODD, 12.7mm BD Combo Tray, Optiarc BC-5540H Tray in BD Combo	25011217	**
18	ODD, 12.7mm BD Rambo, PSN UJ240AF Tray in BD Rambo	25011518	**
18	ODD, 12.7mm BD Rambo, Optiarc BD-5740H Tray in BD Rambo	25011517	**
19	KL5 ODD BEZEL (TRAY_IN RAMBO) (Z370)	31049400	**
19	KL5 BD ODD BEZEL (COMBO) (Z370)	TBD	**
19	Z370 SUPER MULTI BLUE	TBD	**
19	KL6 ODD BEZEL (TRAY_IN RAMBO) (Z470)	31049427	**
19	KL6 BD ODD BEZEL (COMBO) (Z470)	31049429	**
19	Z470 SUPER MULTI BLUE	TBD	**
19	LZ57 ODD BEZEL FOR DVD RW/SUPER MULTI (Z570)	31049303	**
19	LZ57 ODD BEZEL FOR BLUE RAY (Z570)	31049304	**
20	KL5 THERMAL DOOR ASSY (Z370)	31049411	N
20	KL6 AL THERMAL DOOR ASSY (Z470)	31049441	N
20	LZ57 HDD DOOR DIS FOR QUAD CORE W/BUMP (Z570)	31049301	N
20	LZ57 HDD DOOR DIS FOR DUAL CORE WO/BUMP (Z570)	31049302	N
20	LZ57 HDD DOOR UMA FOR DUAL CORE WO/BUMP (Z570)	31049552	N
20	LZ57 HDD DOOR UMA FOR QUAD CORE W/BUMP (Z570)	31049553	N

LCD FRUs

In Lenovo Z370/Z470/Z570, there are following types of LCDs.

- “13.3-in. HD TFT” (Z370)
- “14.0-in. HD TFT” (Z470)
- “15.6-in. HD TFT” (Z570)



13.3-in. HD TFT

Table 6. Parts list—13.3-in. HD TFT

No.	FRU	FRU no.	CRU ID
1	KL5 LCD BEZEL 39KL5LBLV00	31049384	N
3	13.3 HD LED Panel, B133XW03 V0	18004181	N
3	13.3 HD LED Panel, N133BGE-L41	18004782	N
3	13.3 HD LED Panel, LP133WH2-TLL3	18004432	N
3	13.3 HD LED Panel, CLAA133WB01A	18004780	N
4	KL5 LCD BRACKET(HINGE)R+L	31049397	N
5	KL5 CAMERA MODULE 0.3M BIS/CCY	31049398	N
5	KL5 CAMERA MODULE 2.0M BIS/CCY/LTN	31049399	N
6	KL5 LCD CABLE FOR WXGA LCD 40/30P,R1A	31049385	N
7	KL5 LCD COVER W/WLAN ANTENNA-BLACK	31049379	N
7	KL5 LCD COVER W/WLAN ANTENNA-PINK	31049380	N
7	KL5 LCD COVER W/WLAN ANTENNA-BLUE	31049383	N

14.0-in. HD TFT

Table 6. Parts list—14.0-in. HD TFT

No.	FRU	FRU no.	CRU ID
1	KL6 LCD BEZEL-BLACK 39KL6LBLV00	31049424	N
3	14.0 HD LED Panel, B140XW01 V8	18004799	N
3	14.0 HD LED Panel, N140BGE-L21	18004798	N
3	14.0 HD LED Panel, LP140WH4-TLA1	18004797	N
3	14.0 HD LED Panel, LTN140AT16-L01	18004796	N
3	14.0 HD LED Panel, HT140WXB-501	18004795	N
4	KL6 LCD BRACKET(HINGE)R+L	31049426	N
5	KL6 CAMERA MODULE 2.0M BIS/CCY/LTN	31049604	N
5	KL5 CAMERA MODULE 0.3M BIS/CCY/LTN	31049605	N
6	KL6 LCD CABLE FOR WXGA LCD 40/30P	31049425	N
7	KL6 LCD COVER W/WLAN ANTENNA -BLACK	31049414	N
7	KL6 LCD COVER W/WLAN ANTENNA-PINK	31049415	N
7	KL6 LCD COVER W/WLAN ANTENNA-BLUE	31049423	N

15.6-in. HD TFT

Table 6. Parts list—13.3-in. HD TFT

No.	FRU	FRU no.	CRU ID
1	LZ57 LCD BEZEL W/CAMERA HOLE	31049306	N
2	LZ57 LCD SCREW RUBBER	31049318	N
3	15.6 HD LED Panel, M156NWR2 R0	18004784	N
3	15.6 HD LED Panel, N156BGE-L21	18004787	N
3	15.6 HD LED Panel, LP156WH4-TLA1	18004786	N
3	15.6 HD LED Panel, LTN156AT16-L01	18004785	N
3	15.6 HD LED Panel, B156XW02 V2	18003797	N
4	LZ57 LCD BRACKET W/HINGE LEFT	31049308	N
4	LZ57 LCD BRACKET W/HINGE RIGHT	31049309	N
5	LZ57 CAMEAR 0.3M VGA 10P2SF016B LITEON	31049300	N
5	LA47 CAMEAR 2M CHICONY 56.18007.611	31047643	N
6	LZ57 LVDS CABLE W/CAREMA CABLE	31049297	N
7	LZ57 LCD COVER Grey Metal W/ANTENNA	31049312	N
7	LZ57 LCD COVER Light Blue W/ANTENNA	31049785	N
7	LZ57 LCD COVER Red Metal W/ANTENNA	31049787	N

Keyboard

Table 7. Parts list—Keyboard

Language			P/N	CRU ID
Z370/Z470	Chicony	English	25011802	**
		U.K. English	25012024	
		Italian	25012023	
		Spanish	25012022	
		Turkish	25012021	
		Thai	25012020	
		Portuguese	25012019	
		Latin	25012018	
		Canadian English&French	25012088	
		Korean	25012016	
		Traditional Chinese	25012015	
		Russian	25012014	
		French	25012013	
		German	25012012	
		Arabic	25012011	
		Brazilian	25012010	
		Japanese	25012009	
		Dutch	25012008	
		Greek	25012007	
		Hebrew	25012006	
		Hungarian	25012005	
		Four Nordic countries	25012004	
		Belgian	25012003	
		Icelandic	25012002	
		Slovenian	25012001	
		Swiss	25012000	
	International English	25011999		
	Czechoslovakian	25011998		
	Bulgarian	25011997		
	Chicony	English	25013193	
		U.K. English	25013192	
		Italian	25013191	
		Spanish	25013190	
		Turkish	25013189	
Thai		25013188		
Portuguese		25013187		
Latin		25013186		
Canadian English&French		25013185		
Korean		25013184		
Traditional Chinese	25013183			
Russian	25013182			
French	25013181			
German	25013180			

Table 7. Parts list—Keyboard (continued)

Language		P/N	CRU ID
Z370/Z470 (continued)	Chicony (continued)	Arabic	25013179
		Brazilian	25013178
		Japanese	25013177
		Dutch	25013176
		Greek	25013175
		Hebrew	25013174
		Hungarian	25013173
		Four Nordic countries	25013172
		Belgian	25013171
		Icelandic	25013170
		Slovenian	25013169
		Swiss	25013168
		International English	25013167
		Czechoslovakian	25013166
		Bulgarian	25013165
Z370/Z470	Chicony	English	25013004
		U.K. English	25013003
		Italian	25013002
		Spanish	25013001
		Turkish	25013000
		Thai	25012999
		Portuguese	25012998
		Latin	25012997
		Canadian English&French	25012996
		Korean	25012995
		Traditional Chinese	25012994
		Russian	25012993
		French	25012992
		German	25012991
		Arabic	25012990
		Brazilian	25012989
		Japanese	25012988
		Dutch	25012987
		Greek	25012986
		Hebrew	25013106
		Hungarian	25013107
		Four Nordic countries	25012985
		Belgian	25012984
		Icelandic	25012983
		Slovenian	25012982
		Swiss	25012981
		International English	25012980
		Czechoslovakian	25012979
		Bulgarian	25012978

Keyboard

Table 7. Parts list—Keyboard

Language		P/N	CRU ID	
Z370/ Z470	Sunrex	English	25011850	**
		U.K. English	25011978	
		Italian	25011977	
		Spanish	25011976	
		Turkish	25011975	
		Thai	25011974	
		Portuguese	25011973	
		Latin	25011972	
		Canadian English&French	25011971	
		Korean	25011970	
		Traditional Chinese	25011969	
		Russian	25011968	
		French	25011967	
		German	25011966	
		Arabic	25011965	
		Brazilian	25011964	
		Japanese	25011963	
		Dutch	25011962	
		Greek	25011961	
		Hebrew	25011960	
		Hungarian	25011959	
		Four Nordic countries	25011958	
		Belgian	25011957	
		Icelandic	25011956	
		Slovenian	25011955	
		Swiss	25011954	
		International English	25011953	
		Czechoslovakian	25011952	
		Bulgarian	25011951	
	Sunrex	English	25013164	
		U.K. English	25013163	
		Italian	25013162	
		Spanish	25013161	
		Turkish	25013160	
Thai		25013159		
Portuguese		25013158		
Latin		25013157		
Canadian English&French		25013156		
Korean		25013155		
Traditional Chinese		25013154		
Russian		25013153		
French		25013152		
German		25013151		

Table 7. Parts list—Keyboard (continued)

Language			P/N	CRU ID
Z370/Z470 (continued)	Sunrex (continued)	Arabic	25013150	**
		Brazilian	25013149	
		Japanese	25013148	
		Dutch	25013147	
		Greek	25013146	
		Hebrew	25013145	
		Hungarian	25013144	
		Four Nordic countries	25013143	
		Belgian	25013142	
		Icelandic	25013141	
		Slovenian	25013140	
		Swiss	25013139	
		International English	25013138	
		Czechoslovakian	25013137	
		Bulgarian	25013136	
Z370/Z470	Sunrex	English	25012977	
		U.K. English	25012976	
		Italian	25012975	
		Spanish	25012974	
		Turkish	25012973	
		Thai	25012972	
		Portuguese	25012971	
		Latin	25012970	
		Canadian English&French	25012969	
		Korean	25012968	
		Traditional Chinese	25012967	
		Russian	25012966	
		French	25013032	
		German	25013033	
		Arabic	25013034	
		Brazilian	25013035	
		Japanese	25013019	
		Dutch	25013020	
		Greek	25013021	
		Hebrew	25013022	
		Hungarian	25013023	
		Four Nordic countries	25013024	
		Belgian	25013025	
		Icelandic	25013026	
		Slovenian	25013027	
		Swiss	25013028	
		International English	25013029	
		Czechoslovakian	25013030	
		Bulgarian	25013031	

Keyboard

Table 7. Parts list—Keyboard

Language			P/N	CRU ID
Z370/Z470	Dafon	English	25011851	**
		U.K. English	25011949	
		Italian	25011948	
		Spanish	25011947	
		Turkish	25011946	
		Thai	25011945	
		Portuguese	25011944	
		Latin	25011943	
		Canadian English&French	25011942	
		Korean	25011941	
		Traditional Chinese	25011940	
		Russian	25011939	
		French	25011938	
		German	25011936	
		Arabic	25011935	
		Brazilian	25011934	
		Japanese	25011933	
		Dutch	25011932	
		Greek	25011931	
		Hebrew	25011930	
		Hungarian	25011929	
		Four Nordic countries	25011928	
		Belgian	25011927	
		Icelandic	25011926	
		Slovenian	25011925	
		Swiss	25011924	
		International English	25011923	
		Czechoslovakian	25011922	
		Bulgarian	25011921	
	Dafon	English	25013135	
		U.K. English	25013134	
		Italian	25013133	
		Spanish	25013082	
		Turkish	25013083	
		Thai	25013132	
		Portuguese	25013131	
		Latin	25013130	
		Canadian English&French	25013129	
		Korean	25013128	
		Traditional Chinese	25013127	
		Russian	25013126	
		French	25013125	
		German	25013124	

Table 7. Parts list—Keyboard (continued)

Language			P/N	CRU ID
Z370/Z470 (continued)	Dafon (continued)	Arabic	25013123	**
		Brazilian	25013122	
		Japanese	25013121	
		Dutch	25013120	
		Greek	25013119	
		Hebrew	25013118	
		Hungarian	25013117	
		Four Nordic countries	25013116	
		Belgian	25013115	
		Icelandic	25013114	
		Slovenian	25013113	
		Swiss	25013084	
		International English	25013085	
		Czechoslovakian	25013112	
Z370/Z470	Dafon	Bulgarian	25012943	
		English	25013086	
		U.K. English	25013087	
		Italian	25013088	
		Spanish	25013089	
		Turkish	25013090	
		Thai	25013091	
		Portuguese	25012965	
		Korean	25012964	
		Latin	25012963	
		Canadian English&French	25012962	
		Traditional Chinese	25012961	
		Russian	25012960	
		French	25012959	
		German	25012958	
		Arabic	25012957	
		Brazilian	25012956	
		Japanese	25012955	
		Dutch	25012954	
		Greek	25012953	
		Hebrew	25012952	
		Hungarian	25012951	
		Four Nordic countries	25012950	
		Belgian	25012949	
		Icelandic	25012948	
		Slovenian	25012947	
		Swiss	25012946	
		International English	25013092	
		Czechoslovakian	25013093	
		Bulgarian	25013094	

Keyboard

Table 7. Parts list—Keyboard

Language			P/N	CRU ID
Z570	Chicony	English	25011852	**
		U.K. English	25011920	
		Italian	25011919	
		Spanish	25011918	
		Turkish	25011917	
		Thai	25011916	
		Portuguese	25011915	
		Latin	25011914	
		Canadian English&French	25011913	
		Korean	25011912	
		Traditional Chinese	25011911	
		Russian	25011910	
		French	25011909	
		German	25011908	
		Arabic	25011907	
		Brazilian	25011906	
		Japanese	25011905	
		Dutch	25011904	
		Greek	25011903	
		Hebrew	25011902	
		Hungarian	25011803	
		Four Nordic countries	25011804	
		Belgian	25011805	
		Icelandic	25011806	
		Slovenian	25011807	
		Swiss	25011808	
	Chicony	International English	25011809	
		Czechoslovakian	25011810	
		Bulgarian	25011811	
		Bulgarian	25012899	
		Czechoslovakian	25012900	
		International English	25012901	
		Swiss	25012902	
		Icelandic	25012903	
		Slovenian	25012906	
		Belgian	25012907	
		Four Nordic countries	25012908	
		Hungarian	25012909	
		Hebrew	25012910	
		Greek	25012911	
		Dutch	25012912	
		Japanese	25012913	
		Brazilian	25012914	

Table 7. Parts list—Keyboard (continued)

Language		P/N	CRU ID
Z570 (continued)	Chicony (continued)	Arabic	25012915
		German	25013252
		French	25013251
		Russian	25013250
		Korean	25013249
		Traditional Chinese	25013248
		Canadian English&French	25013247
		Latin	25013246
		Portuguese	25013245
		Thai	25013244
		Turkish	25013243
		Spanish	25013242
		Italian	25013241
		U.K. English	25013240
Z570	Chicony	English	25013195
		Bulgarian	25013096
		Four Nordic countries	25013226
		Traditional Chinese	25013213
		Czechoslovakian	25013097
		International English	25013098
		Swiss	25013099
		Slovenian	25013100
		Icelandic	25013101
		Belgian	25013102
		Hungarian	25013103
		Hebrew	25013104
		Greek	25013105
		Dutch	25013212
		Japanese	25013211
		Brazilian	25013210
		Arabic	25013209
		German	25013208
		French	25013207
		Russian	25013206
		Korean	25013205
		Canadian English&French	25013204
		Latin	25013203
		Portuguese	25013202
		Thai	25013201
		Turkish	25013200
		Spanish	25013199
		Italian	25013198
		U.K. English	25013197
		English	25013194

Keyboard

Table 7. Parts list—Keyboard

Language			P/N	CRU ID
Z570	Sunrex	English	25011853	**
		U.K. English	25011895	
		Italian	25011894	
		Spanish	25011893	
		Turkish	25011892	
		Thai	25011891	
		Portuguese	25011890	
		Latin	25011889	
		Canadian English&French	25011888	
		Korean	25011887	
		Traditional Chinese	25011886	
		Russian	25011885	
		French	25011884	
		German	25011883	
		Arabic	25011882	
		Brazilian	25011881	
		Japanese	25011880	
		Dutch	25011879	
		Greek	25011878	
		Hebrew	25011877	
		Hungarian	25011876	
		Four Nordic countries	25011875	
		Belgian	25011874	
		Icelandic	25011873	
		Slovenian	25011871	
		Swiss	25011850	
	Sunrex	International English	25011870	
		Czechoslovakian	25011869	
		Bulgarian	25011868	
		Bulgarian	25012786	
		Czechoslovakian	25012787	
		International English	25012788	
		Swiss	25012789	
		Slovenian	25012790	
Icelandic		25012791		
Belgian		25012792		
Four Nordic countries		25012793		
Hungarian		25012794		
Hebrew		25012795		
Greek		25012796		
Dutch		25012797		
Japanese		25012798		
Brazilian		25012799		

Table 7. Parts list—Keyboard (continued)

Language			P/N	CRU ID
Z570 (continued)	Sunrex (continued)	Arabic	25012800	**
		German	25012801	
		French	25012802	
		Russian	25012803	
		Traditional Chinese	25012804	
		Korean	25012805	
		Canadian English&French	25012806	
		Latin	25012807	
		Portuguese	25012808	
		Thai	25012809	
		Turkish	25012810	
		Spanish	25012811	
		Italian	25012812	
		U.K. English	25012813	
		English	25012814	
Z570	Chicony	Bulgarian	25012774	
		International English	25013231	
		Swiss	25013230	
		Slovenian	25013229	
		Icelandic	25013228	
		Belgian	25013227	
		Four Nordic countries	25013225	
		Hungarian	25013224	
		Hebrew	25013223	
		Greek	25013222	
		Dutch	25013221	
		Japanese	25013220	
		Brazilian	25013219	
		Arabic	25013218	
		German	25013217	
		French	25013216	
		Russian	25013215	
		Traditional Chinese	25013214	
		Korean	25013036	
		Canadian English&French	25013037	
		Latin	25013038	
		Portuguese	25013039	
		Thai	25013040	
		Turkish	25013041	
		Spanish	25013042	
		Italian	25013043	
		U.K. English	25013044	
		English	25013045	

Keyboard

Table 7. Parts list—Keyboard

Language			P/N	CRU ID
Z570	Dafon	English	25011847	**
		U.K. English	25011846	
		Italian	25011845	
		Spanish	25011844	
		Turkish	25011843	
		Thai	25011842	
		Portuguese	25011841	
		Latin	25011840	
		Canadian English&French	25011839	
		Korean	25011834	
		Traditional Chinese	25011833	
		Russian	25011832	
		French	25011831	
		German	25011830	
		Arabic	25011829	
		Brazilian	25011828	
		Japanese	25011827	
		Dutch	25011826	
		Greek	25011825	
		Hebrew	25011824	
		Hungarian	25011823	
		Four Nordic countries	25011822	
		Belgian	25011821	
		Icelandic	25011820	
		Slovenian	25011819	
		Swiss	25011818	
	Dafon	International English	25011817	
		Czechoslovakian	25011816	
		Bulgarian	25011815	
		Bulgarian	25012844	
		Czechoslovakian	25012845	
		International English	25012846	
		Swiss	25012847	
		Slovenian	25012848	
		Icelandic	25012849	
		Belgian	25012850	
		Four Nordic countries	25012851	
		Hungarian	25012852	
		Hebrew	25012853	
		Greek	25012854	
		Dutch	25012855	
		Japanese	25012856	
		Brazilian	25012857	

Table 7. Parts list—Keyboard (continued)

Language			P/N	CRU ID
Z570 (continued)	Dafon (continued)	Arabic	25012858	**
		German	25013047	
		French	25013048	
		Russian	25013049	
		Traditional Chinese	25013050	
		Korean	25013051	
		Canadian English&French	25013052	
		Latin	25013053	
		Portuguese	25013054	
		Thai	25013055	
		Turkish	25013056	
		Spanish	25013057	
		Italian	25013058	
		U.K. English	25013059	
		English	25013060	
Z570	Chicony	Bulgarian	25012815	
		Czechoslovakian	25013239	
		International English	25013238	
		Swiss	25013237	
		Slovenian	25013236	
		Icelandic	25013235	
		Belgian	25013234	
		Four Nordic countries	25013061	
		Hungarian	25013062	
		Hebrew	25013063	
		Greek	25013064	
		Dutch	25013065	
		Japanese	25013066	
		Brazilian	25013067	
		Arabic	25013068	
		German	25013069	
		French	25013070	
		Russian	25013071	
		Traditional Chinese	25013072	
		Korean	25013073	
		Canadian English&French	25013074	
		Latin	25013075	
		Portuguese	25013076	
		Thai	25013077	
		Turkish	25013078	
		Spanish	25013079	
		Italian	25013080	
		U.K. English	25013081	
		English	25013233	

Miscellaneous parts

Table 8. Parts list—Miscellaneous parts

FRU	P/N	CRU ID
System miscellaneous parts:		N
• (a) LZ57 TOUCHPAD BRACKET (Z570)	31049307	
• (b) KL5 HDD BRACKET ASSY (Z370)	31049413	
• (b) KL6 HDD BRACKET ASSY (Z470)	31049443	
• (b) LA57 HDD BRACKET ASSY (Z570)	31048979	
• (c) KL6 ODD BRACKET FBKL6011,REV3A (Z370)	31049428	
• (c) KL6 ODD BRACKET FBKL6011,REV3A (Z470)	31049428	
• (c) LA46 ODD BRKT (Z570)	31043255	
Cable miscellaneous parts:		N
• (d) KL5 USB CABLE FOR DC IN/USB BOARD (Z370)	31049402	
• (d) KL5 DC IN CABLE FOR DC IN/USB BOARD (Z370)	31049403	
• (d) KL6 USB CABLE FOR DC IN/USB BOARD (Z470)	31049430	
• (d) KL6 DC IN CABLE FOR DC IN/USB BOARD (Z470)	31049431	
• (d) LA57 RJ45/USB BOARD CABLE (Z570)	31048989	
• (e) LZ57 CARD READER BOARD CABLE (Z570)	31049296	
• (f) LZ57 POWER BOARD CABLE (Z570)	31049298	
• (g) LZ57 CAPACITIVE BUTTON BOARD W/CABLE (Z570)	31049295	
• (g) LZ57 TOUCHPAD CABLE (Z570)	31049299	
• (h) KL2 BT CABLE ASSY (Z370)	31042935	
• (h) KL2 BT CABLE ASSY (Z470)	31042935	
• (h) LA57 BT CABLE (Z570)	31048987	
• (i) KL5 HDD CABLE(SATA)20P (Z370)	31049405	
Note: Italicized letters in parentheses are references to the exploded view in "Overall" on page 71.		

AC adapters

Table 9. Parts list—3-pin AC adapters

FRU	P/N	CRU ID
65W, Delta ADP-65KH BD 20V/3.25A adapter	36001929	N
65W, Liteon PA-1650-56LC adapter	36001651	
65W, Brazil PA-1650-52LB adapter	36001714	
65W, Chicony CPA-A065 20V3.25A adapter	36001943	
90W, Delta ADP-90DD BD 20V4.5A adapter	36001941	
90W, Liteon PA-1900-56LC 20V4.5A adapter	36001927	
90W, Chicony CPA-A090 20V4.5A adapter	36001942	

Power cords

A Lenovo power cord for a specific country or region is usually available only in that country or region:

Table 10. Parts list—3-pin power cords

Region	P/N	CRU ID
CCC	145000602	*
• SSD YD-118-1+IEC53RVV+SSD-3-2B-1 1m		
CCC	145000600	
• LINETEK PC323+RVV300/300+LS15 1m		
Argentina	145000599	
• LINETEK LS15+H03VV-F+LP39 1m		
Danmark	145000598	
• LINETEK LS15+H03VV-F+LP-38 1m		
Switzerland	145000597	
• LINETEK LS15+H03VV-F+LP-37 1m		
Brazil	145000596	
• LINETEK LS15 H03VV-F LP26A 1m		
Israel	145000595	
• LINETEK LS15+H03VV-F+LP-41 1m		
UL	145000594	
• LINETEK LP-30B + SPT-2 + LS15 1m		
UK	145000593	
• LINETEK LP-61L+ H03VV-F+ LS15 1m		
Indian	145000592	
• LINETEK PE-361+ H05VV-F+ LS15 1m		
Italy	145000591	
• LINETEK LS15+H03VV-F+PE-336 1m		
Korea	145000590	
• LINETEK LS15+H05VV-F+LP-E04A 1m		
Australia	145000589	
• LINETEK LS15+H03VV-F+LP-23A 1m		
Taiwan	145000588	
• LINETEK LS15+VCTF+LP-53 1m		
Japan	145000587	
• LINETEK LS15+VCTF+LP-54 1m		
Africa	145000586	
• LINETEK LS15+H03VV-F+PE-364 1m		
CE	145000585	
• LINETEK LP-34+H03VV-F + LS15 1m		
CCC	145000568	
• Longwell LSG-31+RVV300/300+LS-18 1m		
Argentina	145000567	
• Longwell LP-24+H03VV-F+LS-18 1m		
Danmark	145000566	
• Longwell LP-40+H03VV-F+LS-18 1m		
Switzerland	145000565	
• Longwell LP-37+H03VV-F+LS-18 1m		

Table 10. Parts list—3-pin power cords (continued)

Region	P/N	CRU ID
Brazil	145000564	*
• Longwell LP-46+H03VV-F+LS-18 1m		
Israel	145000563	
• Longwell LP-41+H03VV-F+LS-18 1m		
UL	145000562	
• Longwell LP-30B+SPT-2 18AWG+LS-18 1m		
UK	145000561	
• Longwell LP-61L+H03VV-F+LS-18 1m		
Indian	145000560	
• Longwell LP-67+BIS+LS-18 1m		
Italy	145000559	
• Longwell LP-22+H03VV-F+LS-18 1m		
Korea	145000558	
• Longwell LP-486+KTLH03VV-F+LS-5 1m		
Australia	145000557	
• Longwell LP-23A+LFC-3R+LS-18 1m		
Taiwan	145000556	
• Longwell LP-71+VCTF+LS-33 1m		
Japan	145000555	
• Longwell LP-54+VCTF+LS-18 1m		
Africa	145000554	
• Longwell LP-39+H03VV-F+LS-18 1m		
CE	145000553	
• Longwell LP-34A+H03VV-F+LS-18 1m		
CCC	145000538	
• Volex LSG-31+RVV300/300+LS-18 1m		
Argentina	145000528	
• Volex LP-24+H03VV-F+LS-18 1m		
Danmark	145000534	
• Volex LP-40+H03VV-F+LS-18 1m		
Switzerland	145000524	
• Volex LP-37+H03VV-F+LS-18 1m		
Brazil	145000527	
• Volex LP-46+H03VV-F+LS-18 1m		
Israel	145000526	
• Volex LP-41+H03VV-F+LS-18 1m		
UL	145000537	
• Volex LP-30B+SPT-2 18AWG+LS-18 1m		
UK	145000605	
• Volex LP-61L+H03VV-F+LS-18 1m		
Indian	145000536	
• Volex LP-67+BIS+LS-18 1m		
Italy	145000535	
• Volex LP-22+H03VV-F+LS-18 1m		

Table 10. Parts list—3-pin power cords (continued)

Region	P/N	CRU ID
Korea Volex LP-486+KTLH03VV-F+LS-5 1m	145000533	*
Australia Volex LP-23A+LFC-3R+LS-18 1m	145000532	
Taiwan Volex LP-71+VCTF+LS-33 1m	145000531	
Japan Volex LP-54+VCTF+LS-18 1m	145000530	
CE Volex LP-34A+H03VV-F+LS-18 1m	145000525	

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