

**KRB400A**

# **Blower (Chapter of blower main body) Service Manual**

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All information contained in this publication is based on the latest product information available at the time of publication. Illustrations and photographs in this publication are intended for reference use only and may not depict actual model component parts.

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**LIST OF ABBREVIATIONS**

A	ampere(s)	lb	pounds(s)
ABDC	after bottom dead center	m	meter(s)
AC	alternating current	min	minute(s)
ATDC	after top dead center	N	newton(s)
BBDC	before bottom dead center	Pa	pascal(s)
BDC	bottom dead center	PS	horsepower
BTDC	before top dead center	psi	pound(s) per square inch
°C	degree(s) Celsius	r	revolution
DC	direct current	rpm	revolution(s) per minute
F	farad(s)	TDC	top dead center
°F	degree(s) Fahrenheit	TIR	total indicator reading
ft	foot, feet	V	volt(s)
g	gram(s)	W	watt(s)
h	hour(s)	Ω	ohm(s)
L	liter(s)		

**Read OWNER'S MANUAL before operating.**

## **EMISSION CONTROL INFORMATION**

To protect the environment in which we all live, Kawasaki has incorporated exhaust emission control systems (EM) in compliance with applicable regulations of the United States Environmental Protection Agency and California Air Resources Board.

### **Exhaust Emission Control System**

The exhaust emission control system applied to this engine consists of a carburetor and an ignition system having optimum ignition timing characteristics.

The carburetor has been calibrated to provide lean air/fuel mixture characteristics and optimum fuel economy with a suitable air cleaner and exhaust system.

## **TAMPERING WITH EMISSION CONTROL SYSTEM PROHIBITED**

Federal law and California State law prohibits the following acts or the causing thereof: (1) the removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new engine for the purpose of emission control prior to its sale or delivery to the ultimate purchaser or while it is in use, or (2) the use of the engine after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

Do not tamper with the original emission related part:

- Carburetor and internal parts
- Spark plugs
- Magneto or electronic ignition system
- Fuel filter
- Air cleaner elements

# Foreword

This KRB400A Service Manual is designed to be used in conjunction with the TE27, TE35, TE40, TEX45, TE48, TEX54, TE56, TE59 2-stroke air cooled gasoline engine Service Manual (P/N 99924-2044-02). The maintenance and repair procedures described in this manual are only those that are unique to the body of the KRB400A blower. Most service operations for this model remain identical to those described in the engine Service Manual. Complete and proper servicing of the KRB400A blower therefore requires both this manual and the engine Service Manual.

The engine Service Manual and this manual are designed primarily for use by trained mechanics in a properly equipped shop. However, they contain enough detail and basic information to make them useful to the owner who desires to perform his own basic maintenance and repair work. A basic knowledge of mechanics, the proper use of tools, and workshop procedures must be understood in order to carry out maintenance and repair satisfactorily. Whenever the owner has insufficient experience or doubts his ability to do the work, all adjustments, maintenance, and repair should be carried out only by qualified mechanics.

In order to perform the work efficiently and to avoid costly mistakes, read the text, thoroughly familiarize yourself with the procedures before starting work, and then do the work carefully in a clean area. Whenever special tools or equipment are specified, do not use makeshift tools or equipment. Precision measurements can only be made if the proper instruments are used, and the use of substitute tools may adversely affect safe operation.

**For the duration of the warranty period**, we recommend that all repairs and scheduled maintenance be performed in accordance with this service manual. Any owner maintenance or repair procedure not performed in accordance with this manual may void the warranty.

To get the longest life out of your equipment:

- Follow the Periodic Maintenance Chart in the Service Manual.
- Be alert for problems and non-scheduled maintenance.
- Use proper tools and genuine Kawasaki engine parts. Special tools, gauges, and testers that are necessary when servicing Kawasaki vehicles are introduced by the Special Tool Catalog or Manual. Genuine parts provided as spare parts are listed in the Parts Catalog.
- Follow the procedures in this manual carefully. Don't take shortcuts.
- Remember to keep complete records of maintenance and repair with dates and any new parts installed.

## How to Use This Manual

All information for a particular system from adjustment through disassembly and inspection is located in a single chapter.

The Quick Reference Guide shows you all of the product's work and assists in locating their chapters. Each chapter in turn has its own comprehensive Table of Contents.

The Periodic Maintenance Chart is located in the General Information chapter. The chart gives a time schedule for required maintenance operations.

Whenever you see these WARNING and CAUTION symbols, heed their instructions! Always follow safe operating and maintenance practices.

### ⚠ WARNING

**This warning symbol identifies special instructions or procedures which, if not correctly followed, could result in personal injury, or loss of life.**

### CAUTION

**This caution symbol identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of equipment.**

This manual contains four more symbols (in addition to WARNING and CAUTION) which will help you distinguish different types of information.

### NOTE

- *This note symbol indicates points of particular interest for more efficient and convenient operation.*

- Indicates a procedural step or work to be done.
- Indicates a procedural sub-step or how to do the work of the procedural step it follows. It also precedes the text of a NOTE.
- ★ Indicates a conditional step or what action to take based on the results of the test or inspection in the procedural step or sub-step it follows.

In most chapters an exploded view illustration of the system components follows the Table of Contents. In these illustrations you will find the instructions indicating which parts require specified tightening torque, oil, grease or a locking agent during assembly.

# General Information

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## 1-2 GENERAL INFORMATION

### Before Servicing

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Before starting to service the engine, carefully read the applicable section to eliminate unnecessary work. Photographs, diagrams, notes, cautions, warnings, and detailed descriptions have been included wherever necessary. Nevertheless, even a detailed account has limitations, a certain amount of basic knowledge is required for successful work.

#### Especially note the following:

- (1) Dirt  
Before removal and disassembly, clean the engine. Any dirt entering the engine, carburetor, or other parts, will work as an abrasive and shorten the life of engine. For the same reason, before installing a new part, clean off any dust or metal filings.
- (2) Tightening Sequence  
Generally, when installing a part with several bolts, nuts, or screws, start them all in their holes and tighten them to a snug fit. Then tighten them evenly, in a staggered sequence. This is to avoid distortion of the part and/or causing gas or oil leakage. Conversely, when loosening the bolts, nuts, or screws, first loosen all of them by about a quarter of a turn and then remove them. Where there is a tightening sequence indication in this Service Manual, the bolts, nuts, or screws must be tightened in the order and method indicated.
- (3) Torque  
When torque values are given in this Service Manual, use them. Either too little or too much torque may lead to serious damage. Use a good quality, reliable torque wrench.
- (4) Force  
Common sense should dictate how much force is necessary in assembly and disassembly. If a part seems especially difficult to remove or install, stop and examine what may be causing the problem. Whenever tapping is necessary, tap lightly using a wooden or plastic-faced mallet. Use an impact driver for screws (particularly for the removal of screws held by a locking agent) in order to avoid damaging the heads.
- (5) Edges  
Watch for sharp edges, especially during major engine disassembly and assembly. Protect your hands with gloves or a piece of thick cloth when lifting the engine or turning it over.
- (6) High-Flash Point Solvent  
A high-flash point solvent is recommended to reduce fire danger. A commercial solvent commonly available in North America is Standard solvent (generic name). Always follow manufacturer and container directions regarding the use of any solvent.
- (7) Gasket, O-Ring  
Do not reuse a gasket or O-ring once it has been in service. The mating surfaces around the gasket should be free of foreign material and perfectly smooth to avoid oil or compression leaks.
- (8) Liquid Gasket, Non-Permanent Locking Agent  
Follow manufacturer's directions for cleaning and preparing surfaces where these compounds will be used. Apply sparingly. Excessive amounts may block engine oil passages and cause serious damage. An example of a nonpermanent locking agent commonly available in North America is Loctite Lock'n Seal (Blue).
- (9) Press  
A part installed using a press or driver, such as a journal, should first be coated with oil on its outer or inner circumference so that it will go into place smoothly.
- (10) Ball Bearing  
When installing a ball bearing, the bearing race which is affected by friction should be pushed by a suitable driver. This prevents severe stress on the balls and races, and prevents races and balls from being dented. Press a ball bearing until it stops at the stop in the hole or on the shaft.
- (11) Oil Seal, Grease Seal  
Replace any oil or grease seals that were removed with new ones, as removal generally damages seals.  
When pressing in a seal which has manufacturer's marks, press it in with the marks facing out. Seals should be pressed into place using a suitable driver, which contacts evenly with the side of seal, until the face of the seal is even with the end of the hole.
- (12) Seal Guide  
A seal guide is required for certain oil or grease seals during installation to avoid damage to the seal lips. Before a shaft passes through a seal, apply a little oil, preferably high temperature grease on the lips to reduce rubber to metal friction.
- (13) Circlip, Retaining Ring  
Replace any circlips and retaining rings that were removed with new ones, as removal weakens and deforms them. When installing circlips and retaining rings, take care to compress or expand them only enough to install them and no more.
- (14) Cotter Pin  
Replace any cotter pins that were removed with new ones, as removal deforms and breaks them.

## GENERAL INFORMATION 1-3

### Before Servicing

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#### (15) Lubrication

Engine wear is generally at its maximum while the engine is warming up and before all the rubbing surfaces have an adequate lubricative film. During assembly, oil or grease (whichever is more suitable) should be applied to any rubbing surface which has lost its lubricative film. Old grease and dirty oil should be cleaned off. Deteriorated grease has lost its lubricative quality and may contain abrasive foreign particles.

Don't use just any oil or grease. Some oils and greases in particular should be used only in certain applications and may be harmful if used in an application for which they are not intended. This manual makes reference to molybdenum disulfide grease (MoS<sub>2</sub>) in the assembly of certain engine parts. Always check manufacturer recommendations before using such special lubricants.

#### (16) Replacement Parts

When there is a replacement instruction, replace these parts with new ones every time they are removed. These replacement parts will be damaged or lose their original function once removed.

#### (17) Inspection

When parts have been disassembled, visually inspect these parts for the following conditions or other damage. If there is any doubt as to the condition of them, replace them with new ones.

Abrasion	Crack	Hardening	Warp
Bent	Dent	Scratch	Wear
Color change	Deterioration	Seizure	

#### (18) Specifications

Specification terms are defined as follows:

"Standards": show dimensions or performances which brand-new parts or systems have.

"Service Limits" indicate the usable limits. If the measurement shows excessive wear or deteriorated performance, replace the damaged parts.

## 1-4 GENERAL INFORMATION

### Model Identification

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KRB400A





## GENERAL INFORMATION 1-5

### General Specifications

Items	KRB400A
Dimensions:	
Overall length	310 mm (12.2 in)
Overall width	440 mm (17.3 in.)
Overall height	450 mm (17.7 in)
Overall weight	8.6 kg (18.9 lbs)
Performance:	
Max. air volume	10.7 m <sup>3</sup> /min (378 cfm)
Max air speed	80 m/s (177 mph)
Engine:	
Type	Forced air cooled 2-stroke, horizontal shaft gasoline engine, TEX54-DX
Displacement	48.6 cm <sup>3</sup> (3.0 cu.in.)
Carburetor	Diaphragm feed, rotary valve, side draft type (Walbro WYK type)
Ignition	Solid state ignition
Spark plug	NGK BPMR7A
Starter	Recoil starter
Fuel:	
Mixing ratio	50 parts of regular unleaded gasoline to 1 part of 2-stroke engine oil by volume
Tank capacity	2.0 L

Specifications are subject to change without notice, and may not apply to every country.

## 1-6 GENERAL INFORMATION

### Setting

Items	Standard
Carburetor	
Make/Type	Walbro/Diaphragm feed, rotary valve, side draft type
Main jet	#50
Idle speed	2400 ~ 2600 rpm
Spark plug gap	0.6 ~ 0.7 mm (0.024 ~ 0.028 in.)
Air gap of ignition coil	0.3 ~ 0.5 mm (0.012 ~ 0.020 in.)

## GENERAL INFORMATION 1-7

### Periodic Maintenance Chart

Periodic Maintenance should be made according to the mark “●” in the following chart.

The maintenance and adjustments outlined below in the periodic maintenance chart must be performed at the prescribed intervals to keep the engine in good running condition.

#### ⚠ WARNING

**Accidental engine starting can cause injury.**

**Always remove the spark plug cap before servicing the engine to prevent accidental starting.**

Maintenance	Interval					
	Daily	First 20 hours	Every 20 hours	Every 50 hours	Every 100 hours	Every 200 hours
Check and replenish fuel	●					
Check for fuel leakage	●					
Check bolts, nuts and screws for looseness and loss	●					
Check throttle lever operation	●					
Check engine switch operation	●					
Check shoulder harness condition	●					
Clean fuel filter			●			
* Clean air filter element				●		
Tighten bolts, nuts and screws		●		●		
Clean spark plug and adjust electrode gap				●		
Remove dust and dirt from cylinder fins					●	
Remove carbon deposits on piston head and inside cylinder						●
Remove carbon deposits in the exhaust pipe of muffler					●	
Clean spark arrester screen (if equipped)				●		
Check the sliding portion of crankshaft, connecting rod etc.						●
Fuel tube	It is recommended to replace every 3 years					

#### NOTE

- The service intervals indicated are to be used as a guide.
- Service with an Asterisk (\*) should be performed more frequently as necessary by operating condition.

## 1-8 GENERAL INFORMATION

### Tightening Torque

The following tables list the tightening torque for the major fasteners and the parts requiring use of a non-permanent locking agent or liquid gasket.

Letters used in the following "Tightening Torque" table mean.

LA: Apply non-permanent locking agent to the threads.

Fasteners	Size	Torque			Remarks
		N·m	kg·m	ft·lb	
Engine Mounting Bolts	M6	6.0 – 8.0	0.60 – 0.80	53 – 71 in·lb	
Fan Mounting Bolts	M6	9.5 – 10.5	0.95 – 1.05	84 – 93 in·lb	LA
Air Filter Case Mounting Screws	M5	3.5 – 4.0	0.35 – 0.40	31 – 35 in·lb	LA
Engine Shroud Mounting Screws	M6	3.5 – 4.2	0.35 – 0.42	31 – 37 in·lb	LA
Engine Shroud Mounting Bolts	M5	2.5 – 3.0	0.25 – 0.30	22 – 27 in·lb	LA
Fuel Tank Mounting Screws	M5	1.0 – 2.0	0.10 – 0.20	8.9 – 18 in·lb	LA
Spark Plug	M14	12 – 17	1.2 – 1.7	106 – 150 in·lb	
Damper Bolts	M6	- - -	- - -	- - -	LA
Crankcase Screws	M6	6.0 – 7.0	0.60 – 0.70	53 – 62 in·lb	LA
Cylinder Bolts	M6	7.0 – 9.0	0.70 – 0.90	62 – 80 in·lb	LA
Flywheel Nut	M10	25 – 30	2.5 – 3.0	18 – 22	
Ignition Coil Mounting Bolts	M5	4.0 – 5.0	0.40 – 0.50	35 – 44 in·lb	
Muffler Mounting Bolts	M6	7.0 – 9.0	0.70 – 0.90	62 – 80 in·lb	LA
Recoil Starter Mounting Screws	M4	1.8 – 2.3	0.18 – 0.23	16 – 20 in·lb	LA
Recoil Pulley Screw	M5	17 – 20	1.7 – 2.0	13 – 15	
Pulley Nut	M10	25 – 30	2.5 – 3.0	18 – 22	
Crankcase Drain Screw	M6	5.0 – 7.0	0.50 – 0.70	44 – 62 in·lb	
General Bolts and Nuts	M4	2.5 – 3.0	0.25 – 0.30	22 – 27 in·lb	
	M5	3.5 – 4.0	0.35 – 0.40	31 – 35 in·lb	
	M6	6.0 – 8.0	0.60 – 0.80	53 – 71 in·lb	

# Disassembly/Assembly

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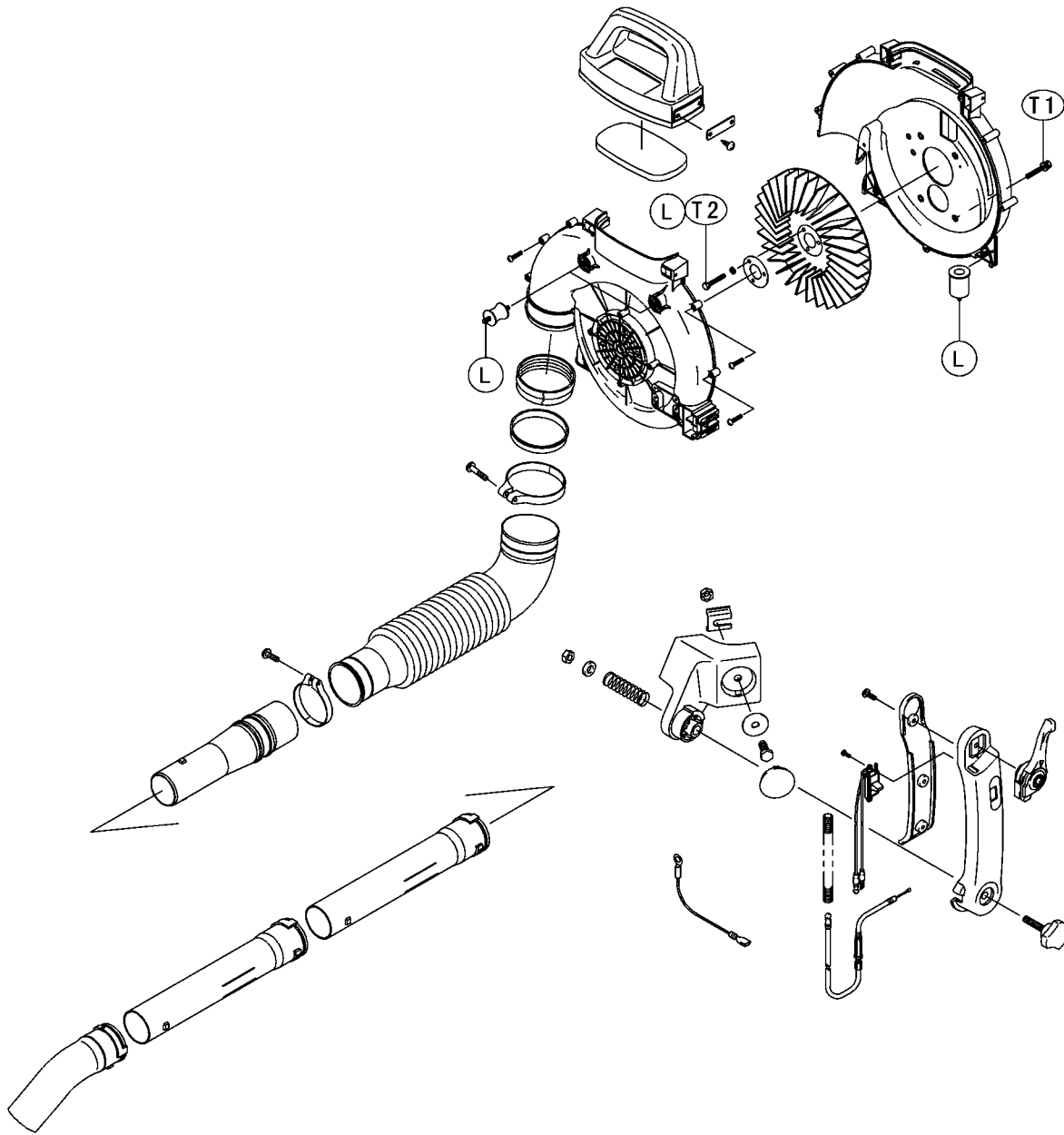
Control Arm.....2-16

    Control Arm Disassembly.....2-16

    Control Arm Assembly.....2-16

## 2-2 DISASSEMBLY/ASSEMBLY

### Exploded View



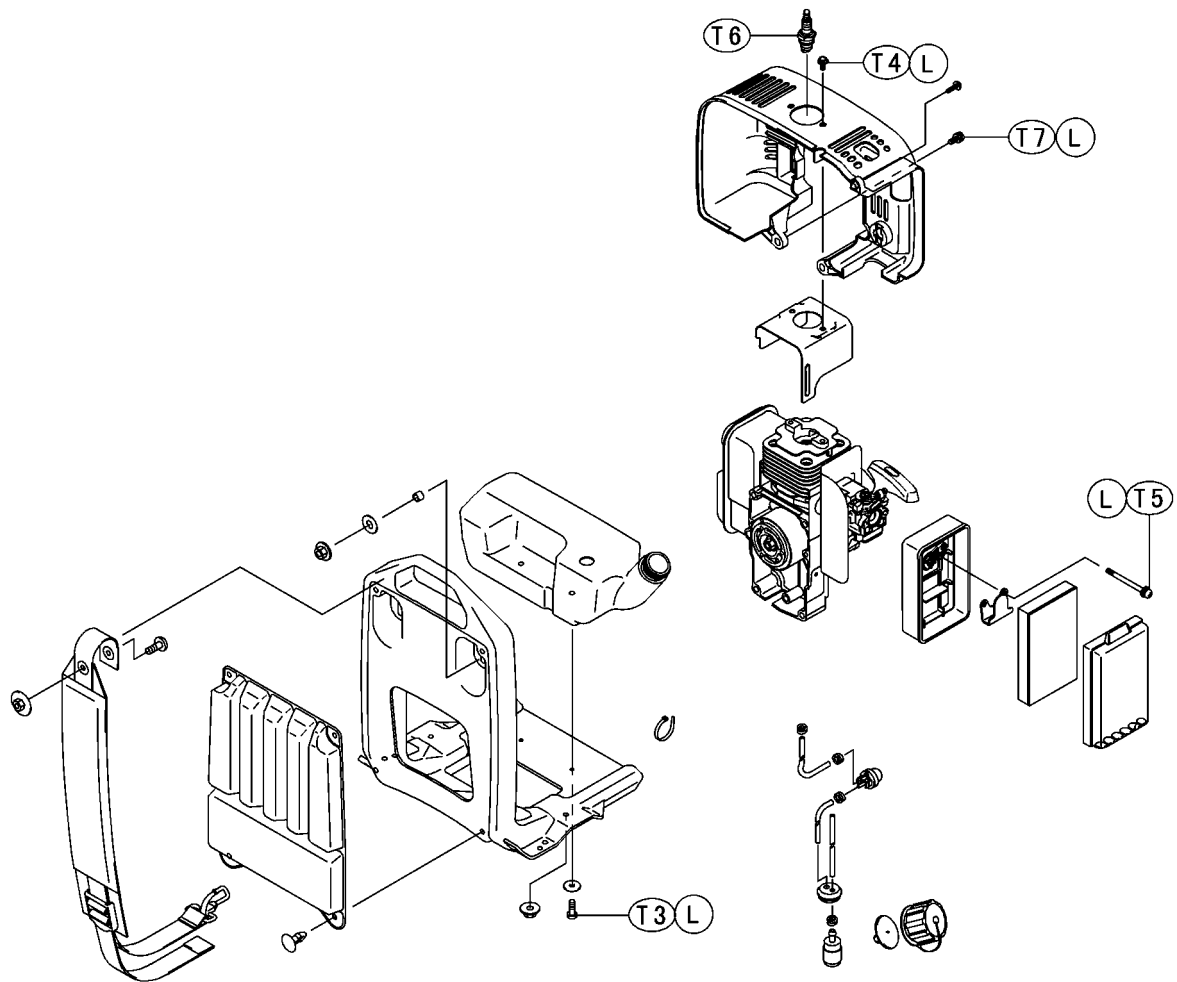
L: Apply non-permanent locking agent.

T1: 6.0 – 8.0 N·m (0.60 – 0.80 kg·m, 53 – 71 in·lb)

T2: 9.5 – 10.5 N·m (0.95 – 1.05 kg·m, 84 – 93 in·lb)

## DISASSEMBLY/ASSEMBLY 2-3

### Exploded View



T3: 1.0 – 2.0 N·m (0.10 – 0.20 kg·m, 8.9 – 18 in·lb)

T4: 2.5 – 3.0 N·m (0.25 – 0.30 kg·m, 22 – 27 in·lb)

T5: 3.5 – 4.0 N·m (0.35 – 0.40 kg·m, 31 – 35 in·lb)

T6: 12 – 17 N·m (1.2 – 1.7 kg·m, 106 – 150 in·lb)

T7: 3.5 – 4.2 N·m (0.35 – 0.42 kg·m, 31 – 37 in·lb)

## 2-4 DISASSEMBLY/ASSEMBLY

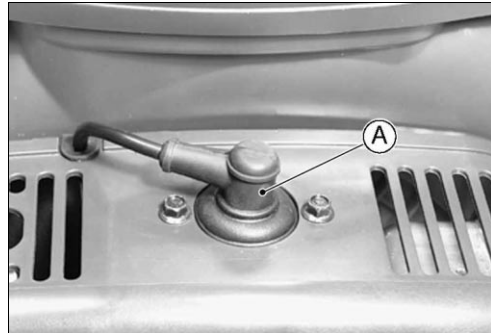
### Blower Main Body

#### Blower Main Body Disassembly

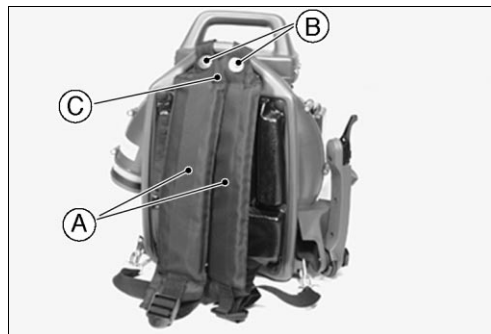
- Drain the fuel from the fuel tank.
- Remove the spark plug cap [A] from the spark plug.

#### ⚠ WARNING

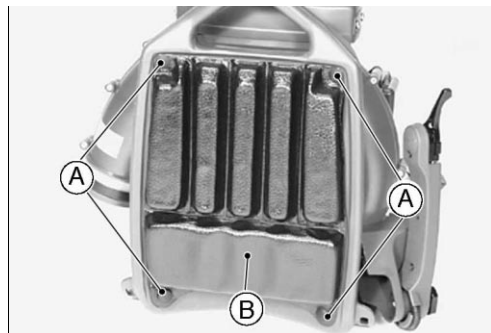
Always remove the spark plug cap from spark plug when servicing the engine to prevent accidental starting.



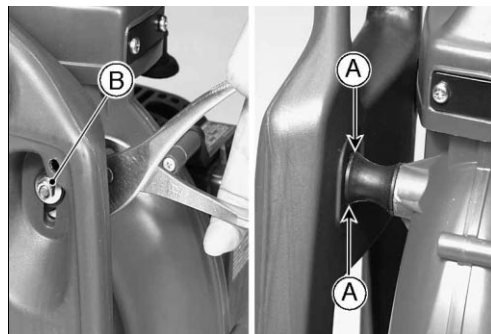
- Set the blower assembly on a clean surface.
- Remove the shoulder harness [A] from the frame.
- Remove:
  - Hooks
  - Screws
  - Nuts [B]
  - Band [C]



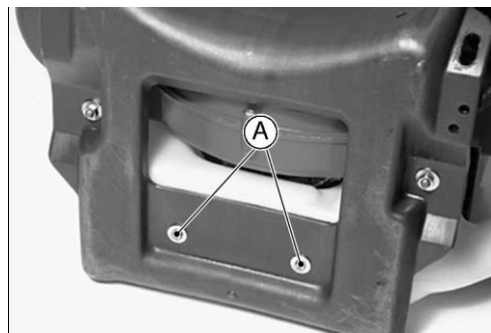
- Remove the stoppers [A] and back pad [B].



- Hold [A] the flange on the damper bolt with a plier, and loosen the nut [B].
- Remove:
  - Nuts
  - Rubber Washers
  - Collars



- Remove:
  - Fuel Tank Screws [A] and Washers

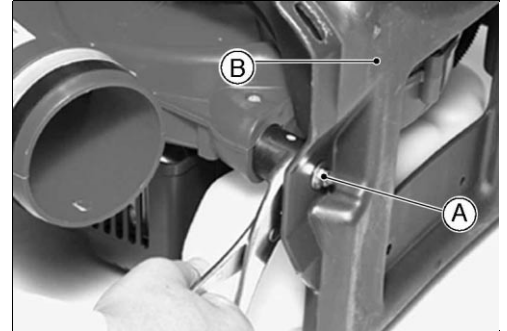




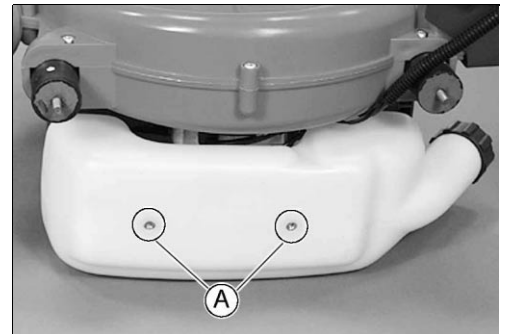
## DISASSEMBLY/ASSEMBLY 2-5

### Blower Main Body

- Hold the flange on the damper bolt with a plier, and loosen the nuts [A] (both sides).
- Remove the frame [B].



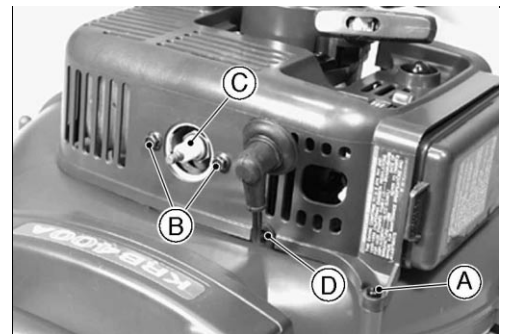
- Check the nuts [A] in the bottom of the fuel tank for loosening.  
★ If the nuts are loosening, replace the fuel tank.



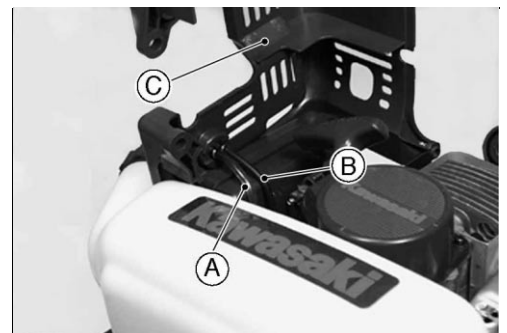
- Turn the blower assembly upside down, and set it on a suitable wooden block and clean cloth.
- Remove:  
Engine Shroud Mounting Screws [A]



- Remove:  
Tapping Screw [A]  
Engine Shroud Mounting Bolts [B]  
Spark Plug [C]  
Spark Plug Wire Grommet [D]



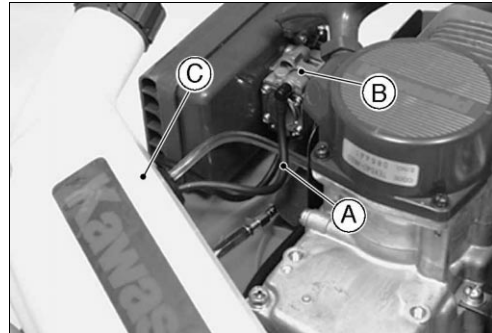
- Remove the following parts from the priming pump.  
Over Flow Tube (Pink) [A] and Clamp  
Over Flow Tube (Black) [B] and Clamp
- Remove the engine shroud [C].



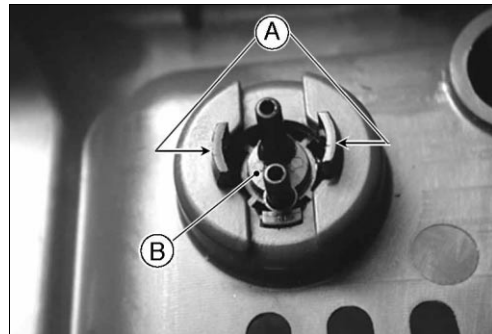
## 2-6 DISASSEMBLY/ASSEMBLY

### Blower Main Body

- Remove the fuel tube (black) [A] from the carburetor [B].
- Remove the fuel tank [C].



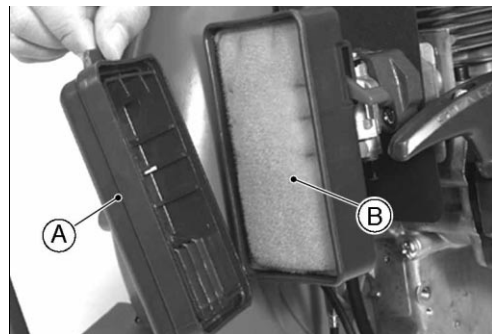
- Pinch [A] the lock tabs of the priming pump [B], and remove it from the engine shroud.



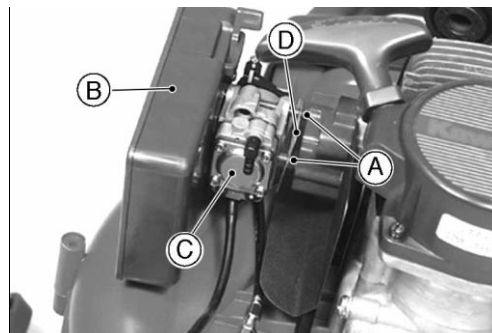
- Remove:  
Engine Cover [A]



- Remove:  
Air Filter Cap [A]  
Air Filter Element [B]



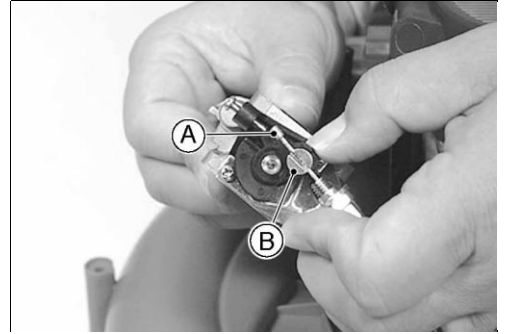
- Remove:  
Air Filter Case Screws [A] and Baffle Plate  
Air Filter Case [B]  
Carburetor [C]  
Gasket [D]



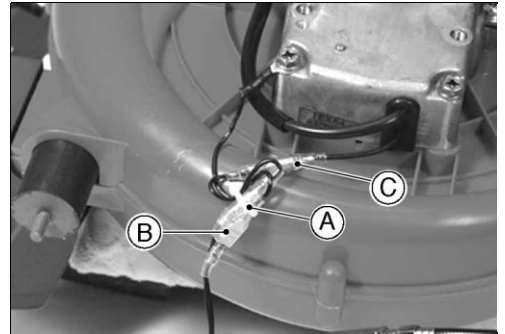
## DISASSEMBLY/ASSEMBLY 2-7

### Blower Main Body

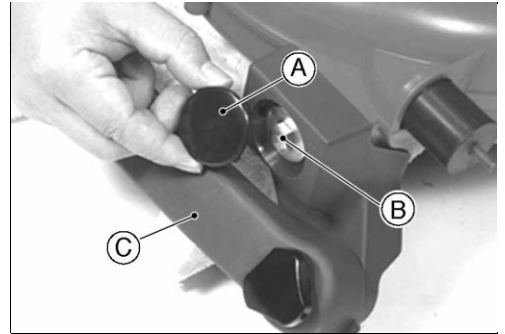
- Remove the throttle cable end [A] from the throttle lever pulley [B].
- Turn the throttle lever to the "L" position.
- Turn the pulley clockwise.
- Remove the carburetor.



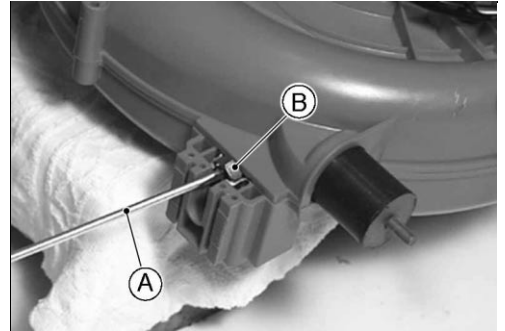
- Remove:
  - Clamp [A]
  - Engine Ground Wire Connector [B]
  - Engine Switch Wire Connector [C]



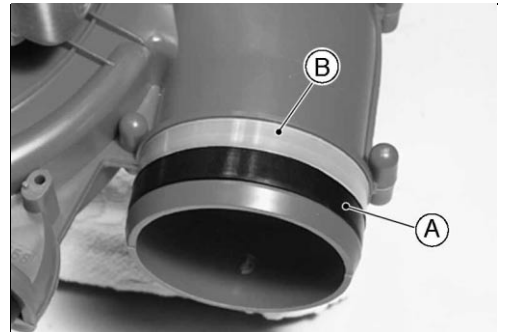
- Remove:
  - Cap [A]
  - Control Arm Holder Bolt [B] and Washer
  - Control Arm Assembly [C]



- Using a suitable tool [A], remove the nut [B].



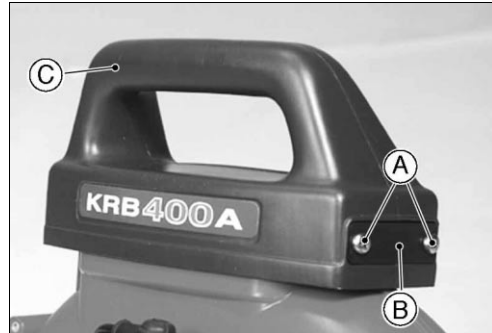
- Remove:
  - Rubber Band [A]
  - Collar [B]



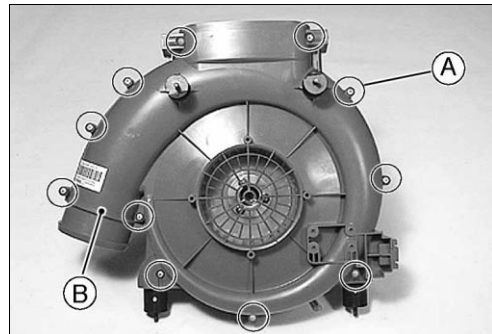
## 2-8 DISASSEMBLY/ASSEMBLY

### Blower Main Body

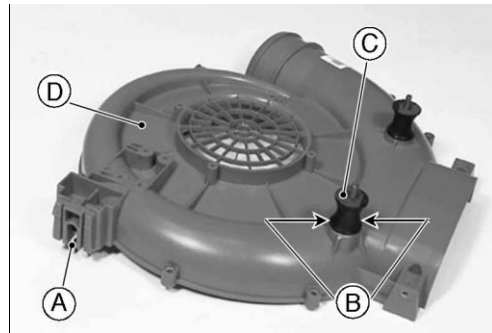
- Remove:
  - Handle Mounting Screws [A] and Plates [B] (both sides)
  - Handle [C]
  - Gasket



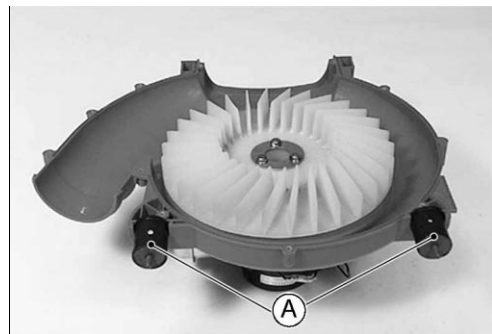
- Turn the blower assembly upside down, and set it on a clean surface.
- Remove:
  - Fan Housing Tapping Screw [A]
  - Fan Housing Cover [B]



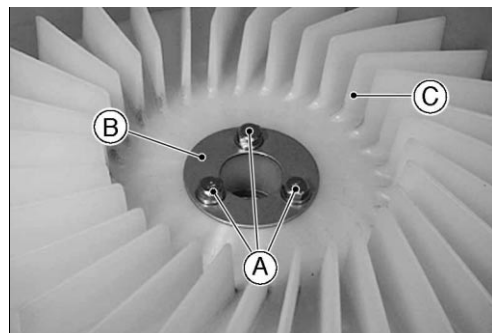
- Remove:
  - Arm Holder Plate [A]
- Holding [B] the flange on the damper bolt [C] with a plier, and remove it from the fan housing cover [D].



- Remove:
  - Damper Bolts [A]



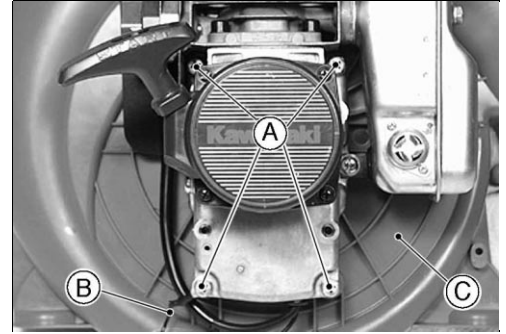
- Remove:
  - Fan Mounting Bolts [A] and Washers
  - Fan Plate [B]
  - Fan [C]



## DISASSEMBLY/ASSEMBLY 2-9

### Blower Main Body

- Turn the blower assembly upside down, and set it on a clean surface.
- Remove:
  - Engine Mounting Bolts [A]
  - Engine Ground Wire [B]
- Remove the engine from the fan housing case [C].

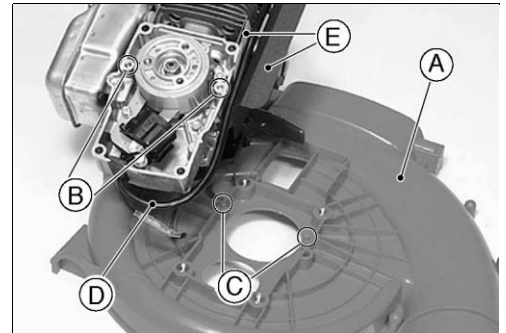


#### Blower Main Body Assembly

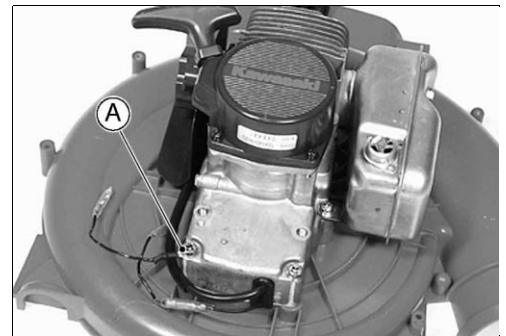
- Set the engine on the fan housing case [A].
- Insert the projections [B] into the holes [C] in the case.
- Run the spark plug wire [D] between the gaskets [E].

#### NOTE

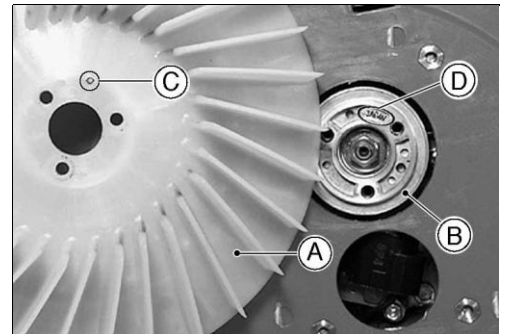
- Do not pinch the spark plug wire under the gasket and engine.



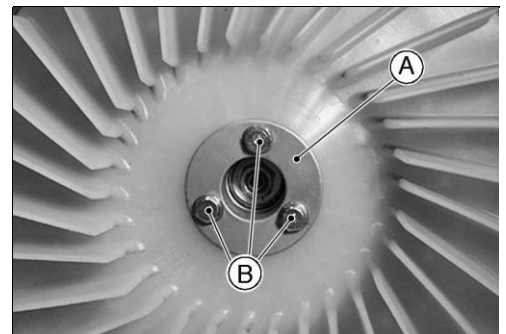
- Install the ground wire terminal [A] as shown.
- Tighten:  
**Torque - Engine Mounting Bolts: 6.0 – 8.0 N·m (0.60 – 0.80 kg·m, 53 – 71 in·lb)**



- Turn the blower assembly upside down, and set it on a clean surface.
- Install the fan [A] on the flywheel [B].
- Align the punch mark [C] on the fan with the mark "JAPAN" [D] on the flywheel.



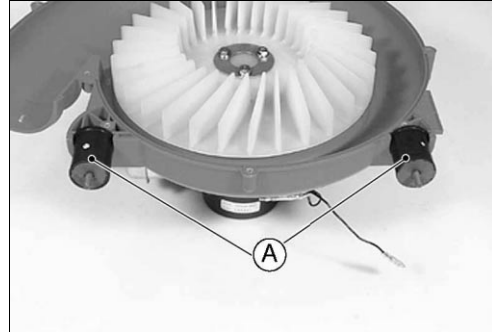
- Install the fan plate [A] on the fan.
- Apply non-permanent locking agent to the fan mounting bolts [B].
- Install the bolts and washers.
- Tighten:  
**Torque - Fan Mounting Bolts: 9.5 – 10.5 N·m (0.95 – 1.05 kg·m, 84 – 93 in·lb)**



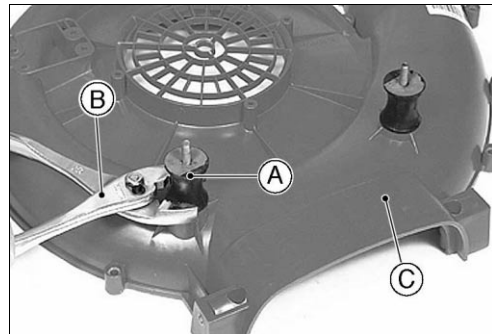
## 2-10 DISASSEMBLY/ASSEMBLY

### Blower Main Body

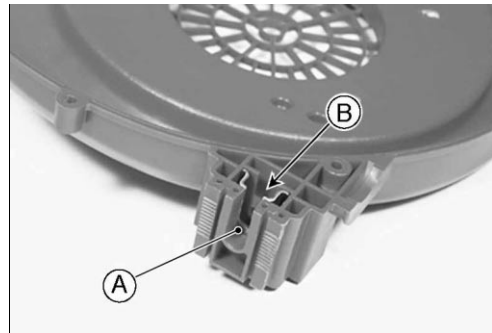
- Install:  
Damper Bolts [A]



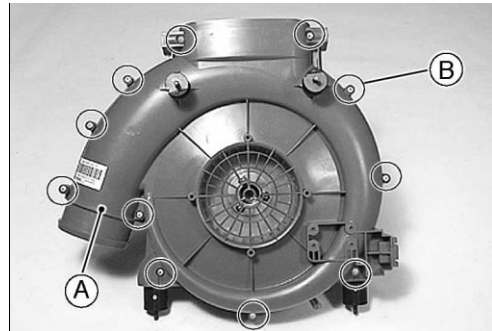
- Hold the flange on the damper bolt [A] with a plier [B], and tighten it on the fan housing cover [C].



- Install the arm holder plate [A] so that the opening [B] of the plate to the mating surface.



- Install:  
Fan Housing Cover [A]  
Fan Housing Tapping Screws [B]



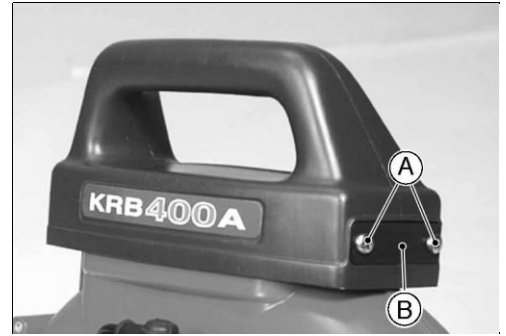
- Install:  
Gasket [A]  
Handle [B]
- Face the product label [C] on the handle to the engine.



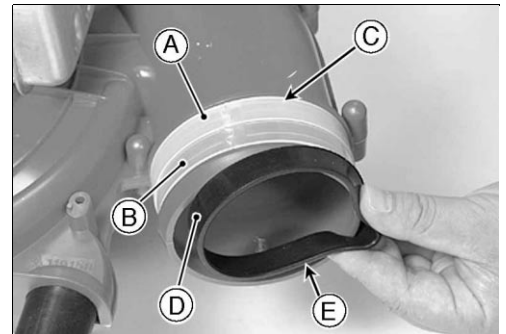
## DISASSEMBLY/ASSEMBLY 2-11

### Blower Main Body

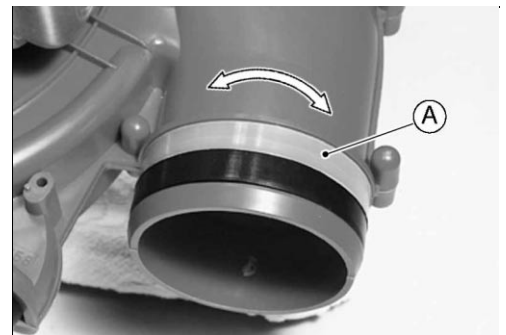
- Install:
  - Plates [A]
  - Handle Mounting Screws [B]



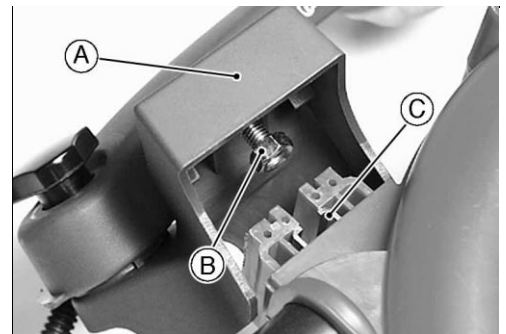
- Install the collar [A] on the fan housing.
  - Face the recess side [B] of the collar downward and contact [C] the upper end of the collar to the housing.
  - Make a gap between the lower end of the collar and the flange of the housing.
- Install the rubber band [D] on the housing.
  - Face the projection side [E] of the band to inside and downward.
  - Fit the projection of the band into the gap.



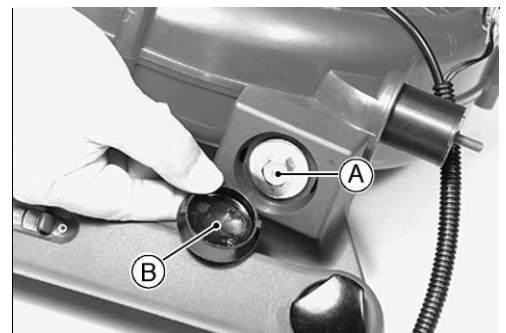
- Turn the collar [A], and confirm whether rubber band has clung surely.



- Turn the blower assembly upside down, and set it on a suitable wooden block and clean cloth.
- Install the control arm holder bolt and washer on the control arm holder [A].
- Screw the nut [B] one or two threads on the bolt.
- Insert the bolt and nut in the opening of the arm holder plate [C].



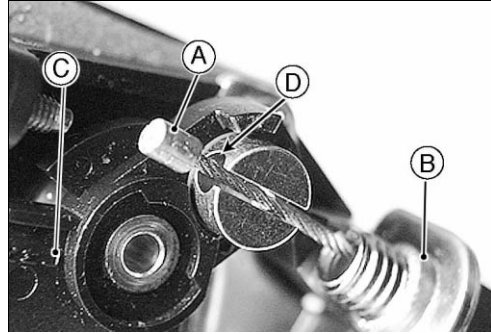
- Tighten the control arm holder bolt [A].
- Install the cap [B] on the control arm holder.



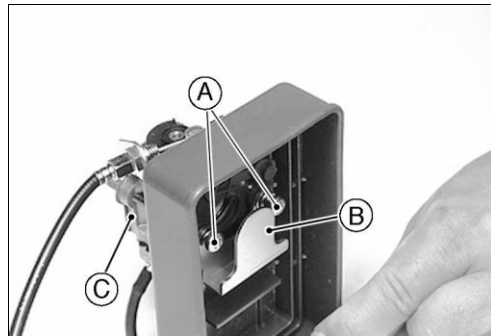
## 2-12 DISASSEMBLY/ASSEMBLY

### Blower Main Body

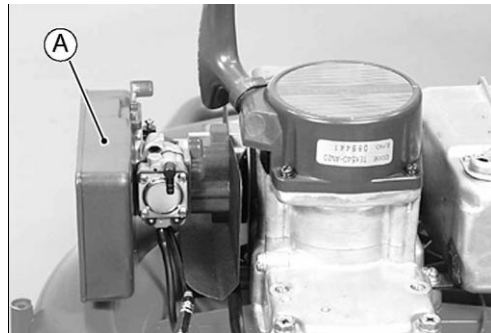
- Insert the throttle cable end [A] into the cable holder [B] on the carburetor.
- Turn the pulley [C] clockwise, and hold it.
- Fit the cable end in the pulley opening [D].



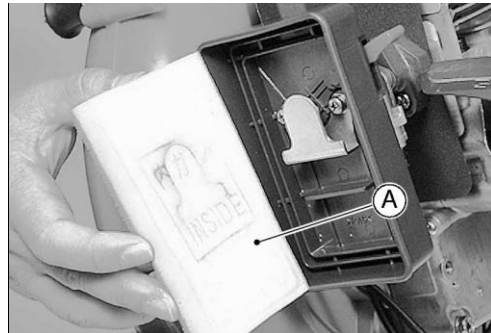
- Install the following parts on the engine.
  - Air Filter Case Screws [A]
  - Baffle Plate [B]
  - Air Filter Case
  - Carburetor
  - Gasket [C]



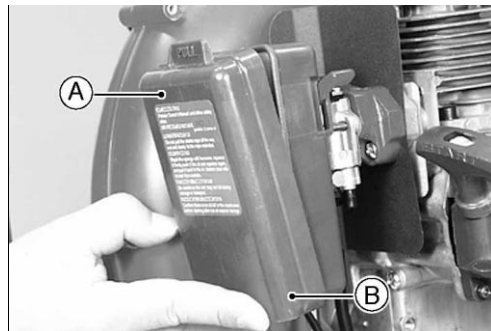
- Apply non-permanent locking agent to the air filter case mounting screws.
- Install the air filter case [A] parallel with the engine.
- Tighten:  
**Torque - Air Filter Case Mounting Screws: 3.5 – 4.0 N·m (0.35 - 0.40 kg·m, 31 – 35 in·lb)**



- Face the white side [A] of the element inward, and fit it in the air filter case.



- Install the air filter cap [A] first its lower end [B], and then upper end firmly.

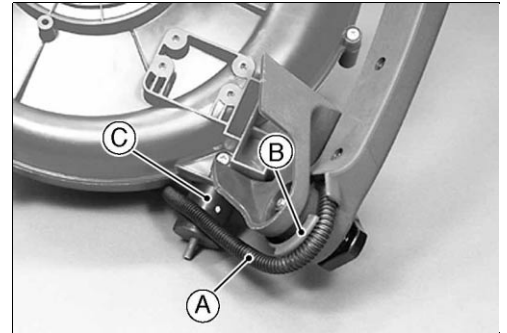




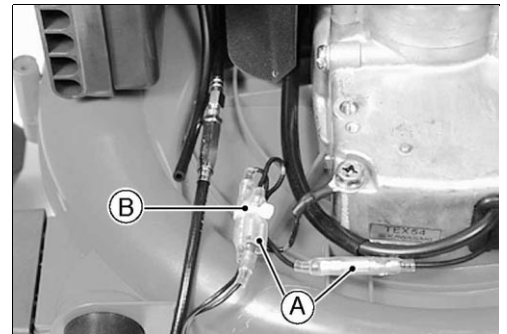
## DISASSEMBLY/ASSEMBLY 2-13

### Blower Main Body

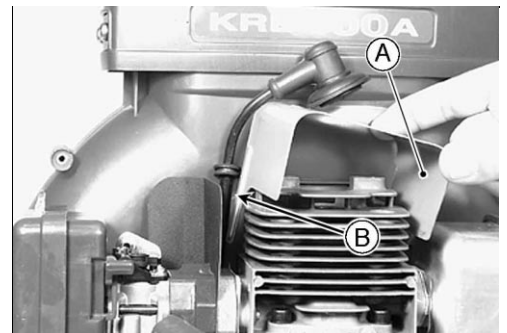
- Run the tube [A] along outside of the rib [B] and inside of the damper bolt [C].



- Connect the wire connectors [A].
- Fasten the wires with a clamp [B].



- Install the engine cover [A] so that the projection [B] face to the spark plug wire.
- Contact the engine cover to the top of the engine.

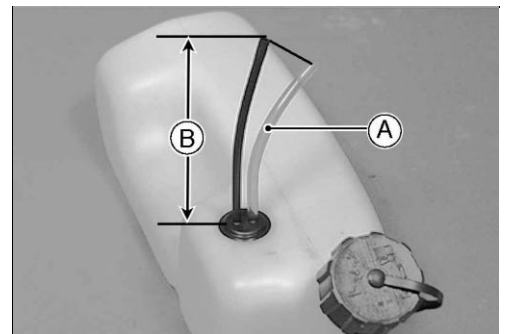


- Before installing the fuel tank, check the following items.
  - Over flow tube (pink) [A] is on the "Kawasaki" label side of the fuel tank.
  - The protrusion [B] of the tubes should be standard length.

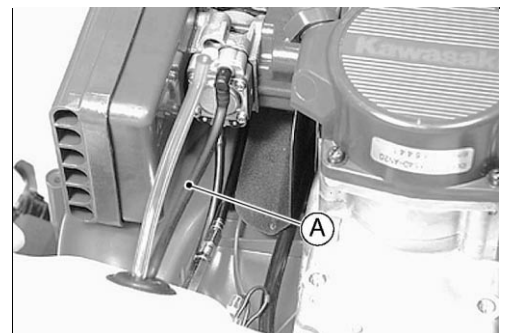
#### Fuel Tank Tubes

Standard Protrusion:  $105 \pm 3$  mm

- ★ If they are inaccurate positions, correct them to the standard position.



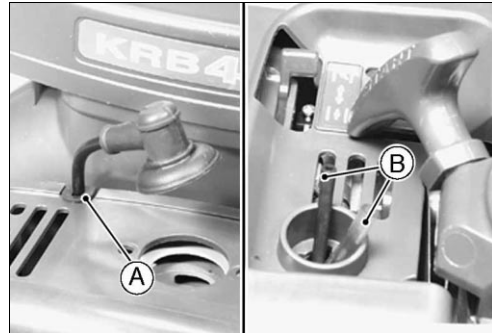
- Install the fuel tube (black) [A] on the carburetor fitting.



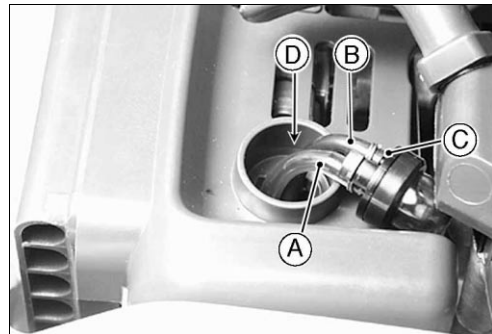
## 2-14 DISASSEMBLY/ASSEMBLY

### Blower Main Body

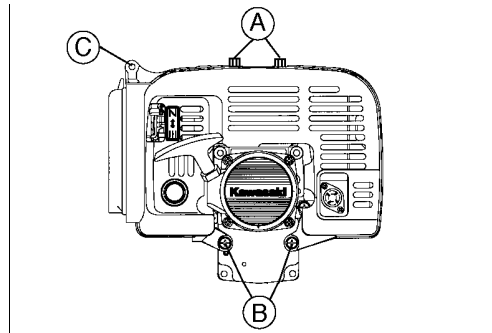
- Install the engine shroud on the engine.
- Fit the grommet [A] on the shroud.
- Take out the over flow tubes (black and pink) [B] from the hole of the shroud.



- Install the following tubes to the priming pump.  
Pink Tube [A] and Clamp to Long Fitting  
Black Tube [B] and Clamp to Short Fitting
- Push down the priming pump so that the projection [C] on the pump align the upper slit [D] in the engine shroud.



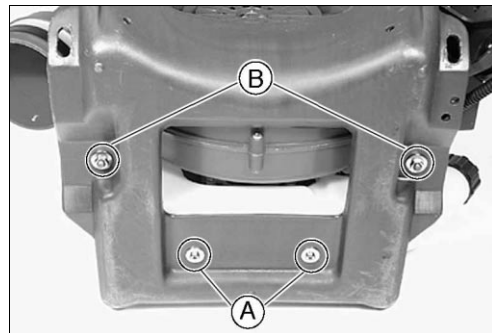
- Install the spark plug.  
**Torque - Spark Plug: 12 – 17 N·m (1.2 – 1.7 kg·m, 106 – 150 in·lb)**
- Apply non-permanent locking agent to the following parts, and tighten them.  
Engine Shroud Mounting Bolts [A]  
Engine Shroud Mounting Screws [B]  
**Torque - Engine Shroud Mounting Bolts: 2.5 – 3.0 N·m (0.25 – 0.30 kg·m, 22 – 27 in·lb)**  
**Engine Shroud Mounting Screws: 3.5 – 4.2 N·m (0.35 – 0.42 kg·m, 31 – 37 in·lb)**



- Tighten the tapping screw [C].
- Turn the blower assembly upside down, and set it on a clean surface.
- Set the frame on the fan housing.
- Apply non-permanent locking agent to the fuel tank mounting screws [A] and tighten them.

**Torque - Fuel Tank Mounting Screws: 1.0 – 2.0 N·m (0.10 – 0.20 kg·m, 8.9 – 18 in·lb)**

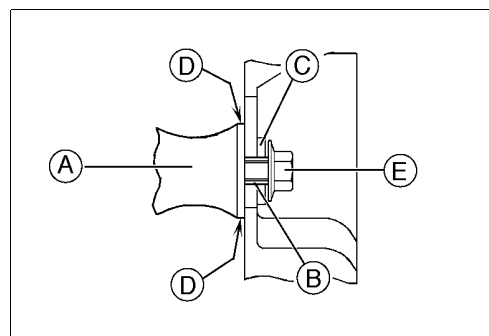
- Apply non-permanent locking agent to the threads of the damper bolt.
- Hold the flange on the damper bolt with a plier, and tighten the nuts [B].



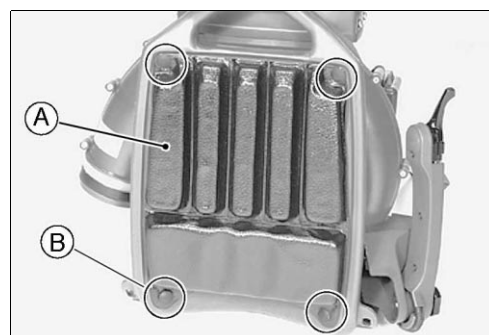
## DISASSEMBLY/ASSEMBLY 2-15

### Blower Main Body

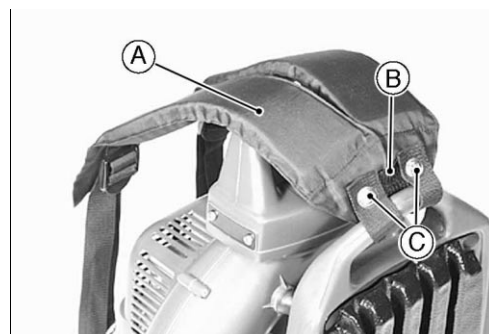
- Install the following parts on the damper bolts [A].
  - Collar [B]
  - Rubber Washer [C]
- Apply non-permanent locking agent to the threads of the bolt.
- Holding the flange [D] on the bolt with a plier, and tighten the nut [E].



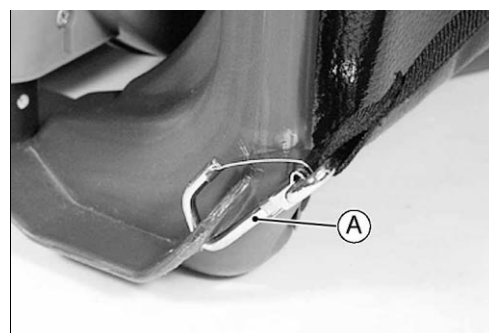
- Put the back pad [A] on the frame, and push down the stoppers [B].



- Install:
  - Shoulder Harness [A]
  - Band [B]
  - Screws [C]
  - Nuts



- Hang the hook [A] to the frame as shown.



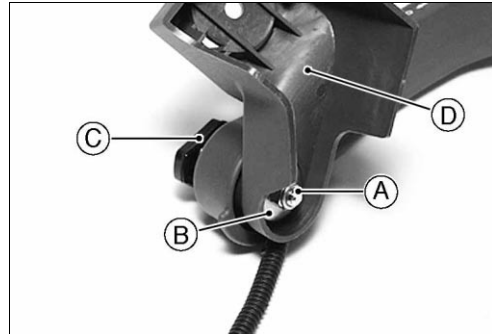
- Install the spark plug cap on the spark plug.

## 2-16 DISASSEMBLY/ASSEMBLY

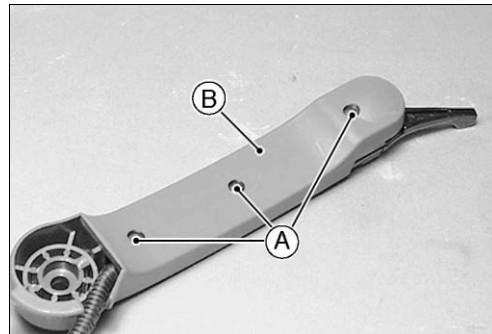
### Control Arm

#### Control Arm Disassembly

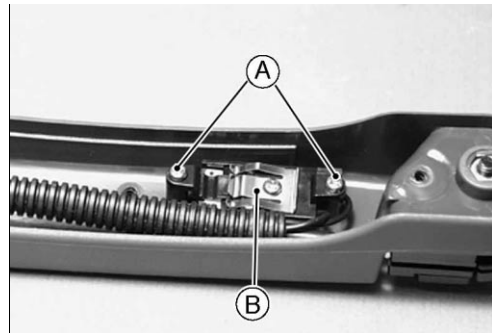
- Remove:
  - Self-locking Nut [A]
  - Washer [B]
  - Spring
  - Knob Bolt [C]
  - Arm Holder [D]



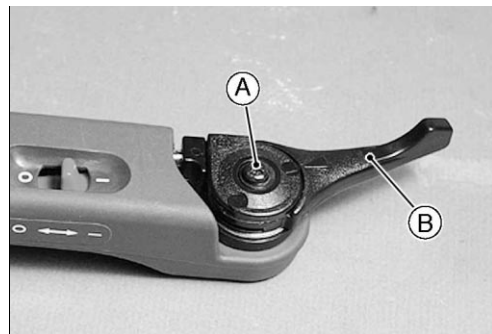
- Remove:
  - Screws [A]
  - Arm Cover [B]



- Remove:
  - Screws [A]
  - Engine Switch Assembly [B]

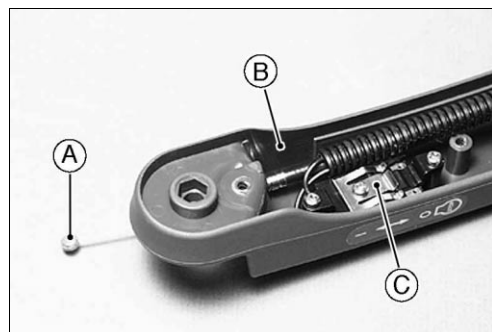


- Remove:
  - Throttle Lever Screw [A]
  - Throttle Lever Assembly [B]
  - Throttle Cable



#### Control Arm Assembly

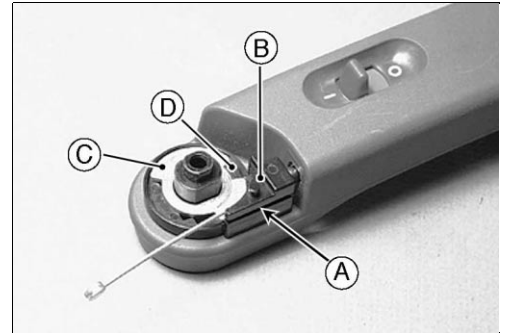
- Insert the throttle cable end [A] through the hole of the control arm [B].
- Install the engine switch assembly [C] as shown, and tighten the screws.



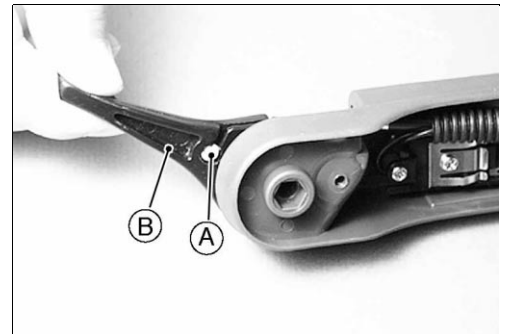
## DISASSEMBLY/ASSEMBLY 2-17

### Control Arm

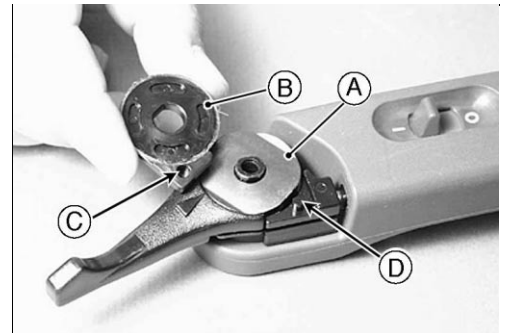
- Install the throttle lever assembly as follows:
- Insert the throttle cable in the groove [A] in the throttle lever base [B], and set the base on the control arm.
- Fit the notch in the position plate [C] to the projection [D] on the base.



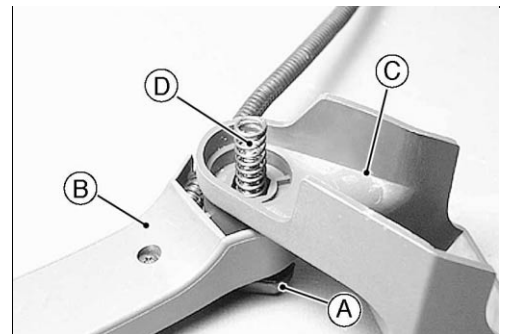
- Insert the throttle cable end [A] into the opening in the throttle lever [B].



- Install:
  - Spring Washer [A]
  - Throttle Lever Cover [B]
- Fit the hole [C] in the cover onto the projection [D] on the throttle lever base.
- Tighten the throttle lever screw, and stop it at the position where the throttle lever moves smoothly.
- Install:
  - Arm Cover
  - Screws



- Install the following parts as shown.
  - Knob Bolt [A]
  - Control Arm [B]
  - Arm Holder [C]
  - Spring [D]



- While pushing down the spring with the washer [A], tighten the self-locking nut [B] until one thread of the bolt becomes visible.

#### NOTE

- Do not use a ordinary nut without the self-locking feature.

