

# TECHNICAL INFORMATION



PRODUCT

**Models No.** ▶ 6207D, 6217D, 6237D  
6317D, 6337D, 6347D

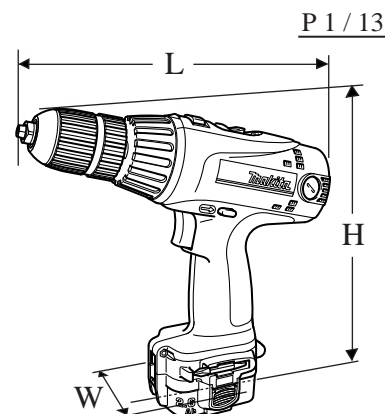
**Description** ▶ 9.6V, 12V, 14.4V Cordless Driver Drills 10mm (3/8")  
12V, 14.4V, 18V Cordless Driver Drills 13mm (1/2")

## CONCEPT AND MAIN APPLICATIONS

These six tools have been developed as upgraded successors to the existing Makita tools of Model 6203D series, and features increased power and enhanced mechanical parts.

One of the remarkable features is the replaceable armature for reduced repair cost.

Listed below are variations of these new models.



Model No.	Battery	Battery Type	Charger
<b>10mm (3/8")</b>	<b>6207DWDE</b> 9134 (9.6V, 2.6Ah) / 2pcs	Ni-MH	DC1413
	<b>6217DWDE</b> 1234 (12V, 2.6Ah) / 2pcs	Ni-MH	DC1413
	<b>6237DWDE</b> 1434 (14.4V, 2.6Ah) / 2pcs	Ni-MH	DC1413
<b>13mm (1/2")</b>	<b>6317DWAE</b> 1222 (12V, 2.0Ah) / 2pcs	Ni-Cd	DC1413
	<b>6317DWDE</b> 1234 (12V, 2.6Ah) / 2pcs	Ni-MH	DC1413
	<b>6317DWFE</b> 1235 (12V, 3.0Ah) / 2pcs	Ni-MH	DC1413
	<b>6337DWAE</b> 1422 (14.4V, 2.0Ah) / 2pcs	Ni-Cd	DC1413
	<b>6337DWDE</b> 1434 (14.4V, 2.6Ah) / 2pcs	Ni-MH	DC1413
	<b>6337DWFE</b> 1435 (14.4V, 3.0Ah) / 2pcs	Ni-MH	DC1413
	<b>6347DWAE</b> 1822 (18V, 2.0Ah) / 2pcs	Ni-Cd	DC1803
	<b>6347DWDE</b> 1834 (18V, 2.6Ah) / 2pcs	Ni-MH	DC1803
	<b>6347DWFE</b> 1835 (18V, 3.0Ah) / 2pcs	Ni-MH	DC1803

**Dimensions: mm ( " )**

<b>10mm (3/8")</b>			
Model No.	<b>6207D</b>	<b>6217D</b>	<b>6237D</b>
Length ( L )	233 (9-1/8)	233 (9-1/8)	233 (9-1/8)
Width ( W )	77 (3)	94 (3-11/16)	94 (3-11/16)
Height ( H )	243 (9-9/16)	243 (9-9/16)	247 (9-3/4)

<b>13mm (1/2")</b>			
Model No.	<b>6317D</b>	<b>6337D</b>	<b>6347D</b>
Length ( L )	243 (9-9/16)	243 (9-9/16)	243 (9-9/16)
Width ( W )	94 (3-11/16)	94 (3-11/16)	95 (3-3/4)
Height ( H )	243 (9-9/16)	247 (9-3/4)	251 (9-7/8)

## ► Specification

See page 2.

## ► Standard equipment

- \* Battery cover ..... 2 pcs.
- \* + - Bit 2-45 ..... 1 pc.
- \* Plastic carrying case ..... 1 pc.

< Note > The standard equipment for the tool shown may differ from country to country.

## ► Optional accessories

Model No.	Battery	Charger
<b>6207D</b>	9120, 9122, 9133, 9134, 9135, 9135A	DC1413, DC1439, DC1803, DC1822, DC9711
<b>6217D</b>	1220, 1222, 1233, 1234, 1235, 1235A	DC1413, DC1439, DC1803, DC1822
<b>6237D</b>	1420, 1422, 1433, 1434, 1435	DC1413, DC1439, DC1803, DC1822
<b>6317D</b>	1220, 1222, 1233, 1234, 1235, 1235A	DC1413, DC1439, DC1803, DC1822
<b>6337D</b>	1420, 1422, 1433, 1434, 1435	DC1413, DC1439, DC1803, DC1822
<b>6347D</b>	1822, 1833, 1834, 1835	DC1803, DC1822

## ► Specification

Specification		10 mm			13 mm		
		6207D	6217D	6237D	6317D	6337D	6347D
Voltage (V)		9.6	12	14.4	12	14.4	18
Chuck capacity (mm [inch])		1 - 10 [1/32 - 3/8]			1.5 - 13 [1/16 - 1/2]		
Drilling capacity (mm [inch])	Steel	10 [3/8]			13 [1/2]		
	Wood	25.4 [1]		32 [1-1/4]	25.4 [1]	32 [1-1/4]	38 [1-1/2]
No load speed (rpm = min -1)	High	0 - 1,300			0 - 1,300		
	Low	0 - 400			0 - 400		
Declutching torque (N.m [kgf.cm / ft.lbs])		1 - 6 [10 - 60 / 0.7 - 4.4]			1 - 6 [10 - 60 / 0.7 - 4.4]		
Max. fastening torque (N.m [kgf.cm/ in.lbs])	Hard joint	50 [500/ 440]	60 [600/ 530]	65 [650/ 580]	60 [600/ 530]	65 [650/ 580]	80 [800/ 710]
	Soft joint	20 [200/ 180]	25 [250/ 220]	30 [300/ 270]	25 [250/ 220]	30 [300/ 270]	35 [350/ 310]
Electric brake		Yes			Yes		
Torque settings		16 stages (+ drill mode)			16 stages (+ drill mode)		
Variable speed control		Yes			Yes		
Mechanical 2-speed		Yes			Yes		
Reverse switch		Yes			Yes		
Net weight with battery: Kg [lbs]		1.7 [3.7]	1.9 [4.2]	2.0 [4.4]	2.0 [4.4]	2.1 [4.6]	2.4 [5.3]

## ► Features and benefits

### New Gear Assembly

Prevents gears from falling out of place.  
Prevents clutch from actuating accidentally in drilling mode.

### High/ Low Speed Change Lever

### More Powerful Output

Realized by stronger motor power plus  
more efficient power transmission by new  
gear assembly

### Change Lever for Drill/ Screwdriver Mode

Working mode can be changed  
simply by one action.

### New Separable Type 31 Motor

1. Uses strong magnet for increased power.
2. Construction without motor case allows;
  - Light motor body.
  - Big diameter fan for increased cooling efficiency
  - Independently replaceable armature

### Adjusting Ring

For 16 stage torque settings

### Externally Accessible Brushes

### Metal Gears for Enhanced Gear Assembly

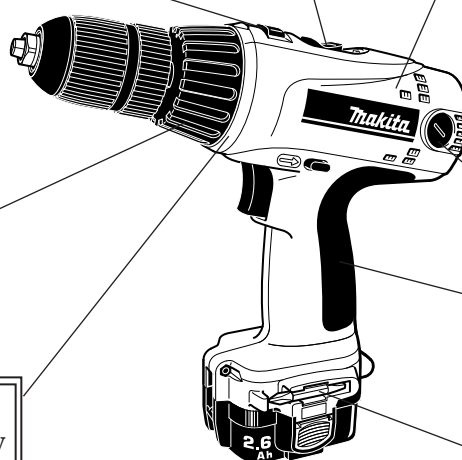
All the gears in gear assembly are  
made of metal.

### Palm Fitting Soft Grip

For controlled operation and  
operator comfort

### Bit Holder \*

For storing a driver bit



[Model 6207D]

Note: The feature with a mark\* is as same as tools of  
Model 6203D series.

## 

Model No.		Makita							Competitor A			
Specification	6207D	6217D/ 6317D	6237D/ 6337D	6347D	6203D	6213D/ 6313D	6233D 6333D	6343D	A-9.6	A-12	A-14.4-0 A-14.4-1	A-18
Voltage (V)	9.6	12	14.4	18	9.6	12	14.4	18	9.6	12	14.4	18
Chuck capacity (mm [inch])	10 [3/8]	10 [3/8]/ 13 [1/2]	10 [3/8]/ 13 [1/2]	13 [1/2]	10 [3/8]	10 [3/8]/ 13 [1/2]	10 [3/8]/ 13 [1/2]	13 [1/2]	10 [3/8]	10 [3/8]	10 [3/8]/ 13 [1/2]	13 [1/2]
	50 [440]	60 [530]	65 [580]	80 [710]	25 [220]	31 [270]	35 [310]	50 [440]	(Not available)	38 [340]	41 [360]	50 [440]
	20 [180]	25 [220]	30 [270]	35 [310]	14 [120]	17 [150]	22 [200]	25 [220]	20 [180]	22 [200]	22 [200]	30 [270]
	----	----	----	----	23 [200]	26 [230]	31 [275]	45 [400]	23 [200]	35 [310]	38 [334]	45 [400]
Externally accessible brushes	Yes			Yes			Yes			No		
Aluminum gear housing	No			No			Yes			No		
Side grip	No			No			Yes			No		
Soft grip handle	Yes			No			No			Yes		
Torque settings	16 stages + drill mode			17 stages + drill mode			16 stages + drill mode			17 stages + drill mode		
No load speed (rpm=minimum - maximum)	High			0 - 1,300			0 - 1,400			0 - 1,450		
	Low			0 - 400			0 - 450			0 - 450		
Dimensions	Length (mm [inch])	233 [9-1/8] 243 [9-9/16]	233 [9-1/8]/ 243 [9-9/16]	243 [9-9/16]	233 [9-1/8] 243 [9-1/8]	233 [9-1/8]/ 243 [9-9/16]	233 [9-1/8]/ 243 [9-9/16]	255 [10]	(Not available)	252 [9-7/8]	252 [9-7/8]	252 [9-7/8]
	Width (mm [inch])	77 [3] 94 [3-11/16]	94 [3-11/16]	95 [3-3/4]	77 [3]	94 [3-11/16]	94 [3-11/16]	95 [3-3/4]		83 [3-1/4]	83 [3-1/4]	86 [3-3/8]
	Height (mm [inch])	243 [9-9/16]	243 [9-9/16]	251 [9-7/8]	241 [9-1/2]	241 [9-1/2]	246 [9-11/16]	249 [9-3/4]		235 [9-1/4]	235 [9-1/4]	235 [9-1/4]
Net weight (with battery): kg [lbs]	1.7 [3.7]	1.9 [4.2]/ 2.0 [4.4]	2.0 [4.4]/ 2.1 [4.6]	2.4 [5.3]	1.7 [3.7]	1.9 [4.2]/ 2.0 [4.4]	2.0 [4.4]/ 2.1 [4.6]	2.5 [5.5]	1.5 [3.4]	1.9 [4.2] [4.2]	2.2 [4.9]	2.5 [5.5]

## ► Comparison of products

### Time Required for Driving a Screw/ Drilling a Hole

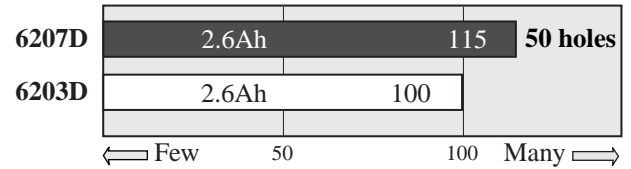
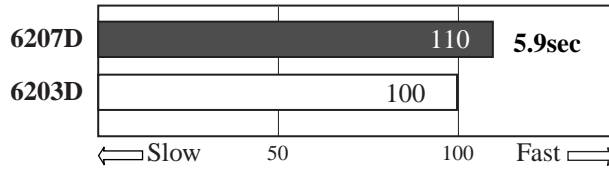


### The Number of Screws Driven/ Holes Drilled on a Single Full-Charge

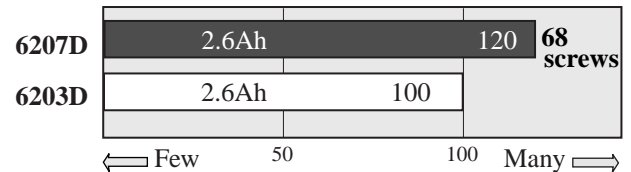
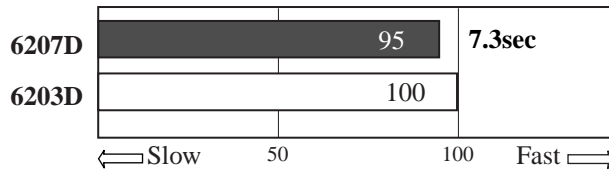


#### ● 9.6V Models (Numbers on the bars below are relative values when the capacities of 6203D are indexed at 100.)

● **Test 1:** Drilled holes in 38mm (1-1/2") thick Spruce; with 7/8" Spade bit ; on High speed drill mode.

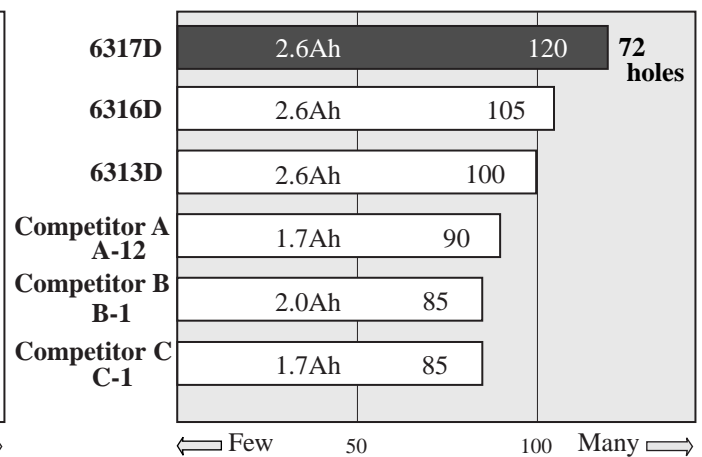
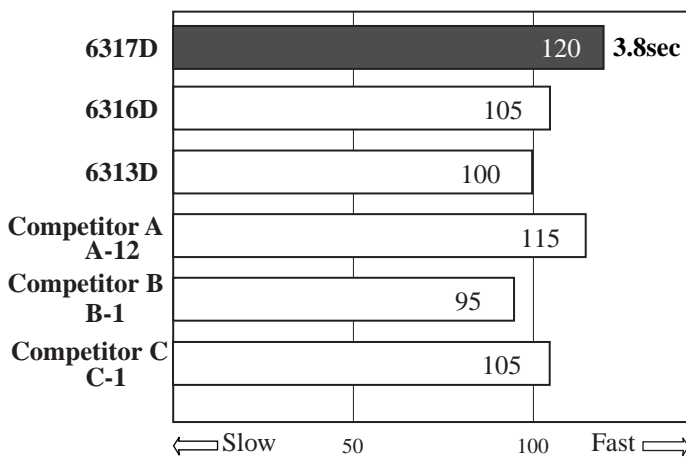


● **Test 2:** Drove 1/4" x 3" Lag bolts ; into Spruce; on Low speed screwdriver mode.

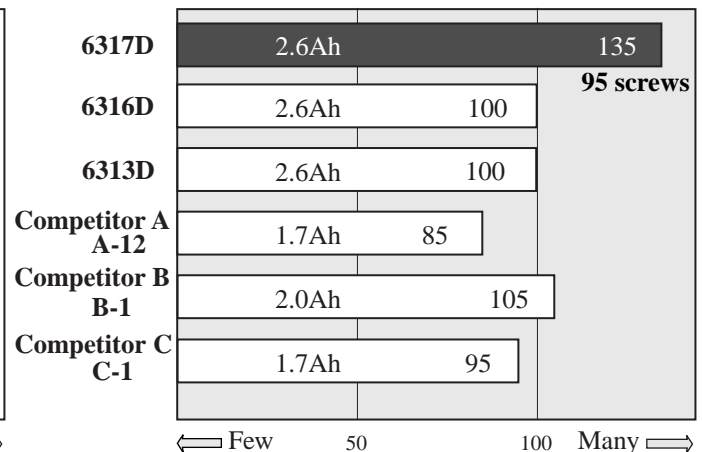
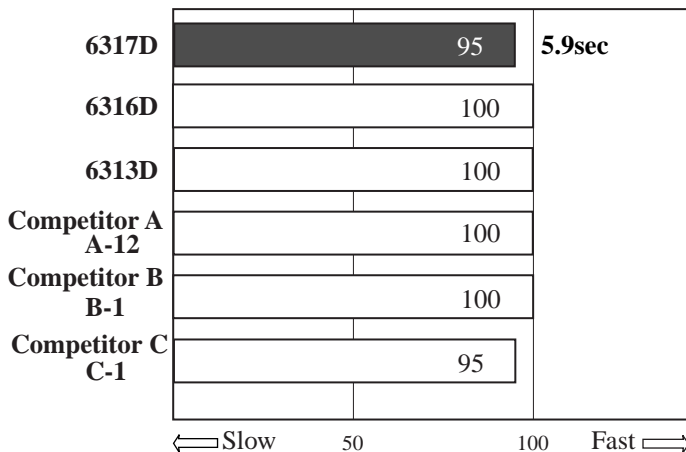


#### ● 12V Models (Numbers on the bars below are relative values when the capacities of 6313D are indexed at 100.)

● **Test 1:** Drilled holes in 38mm (1-1/2") thick Spruce; with 7/8" Spade bit ; on High speed drill mode.




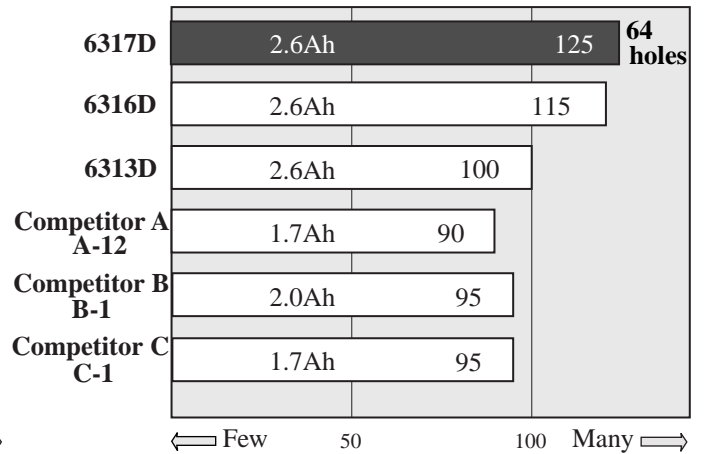
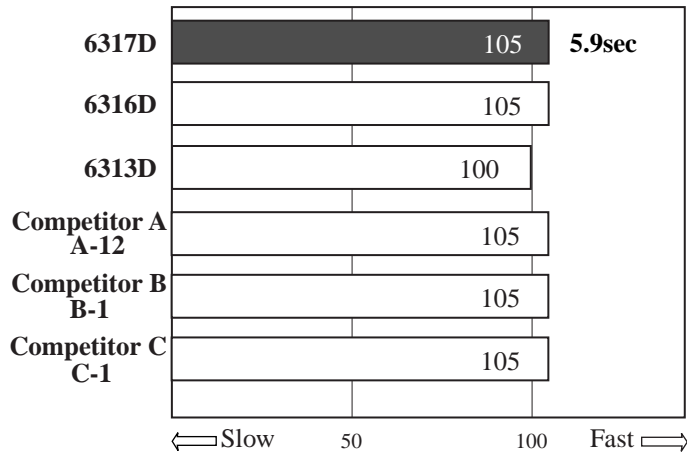
● **Test 2:** Drove 1/4" x 3" Lag bolts ; into Spruce; on Low speed screwdriver mode.




### Time Required for Driving a Screw/ Drilling a Hole

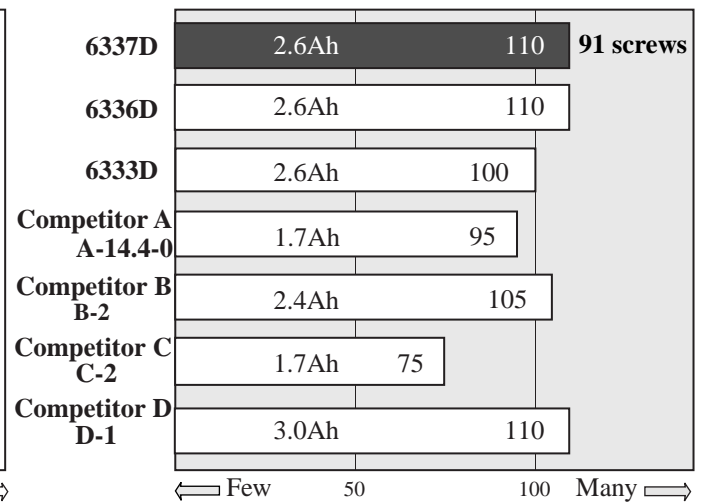
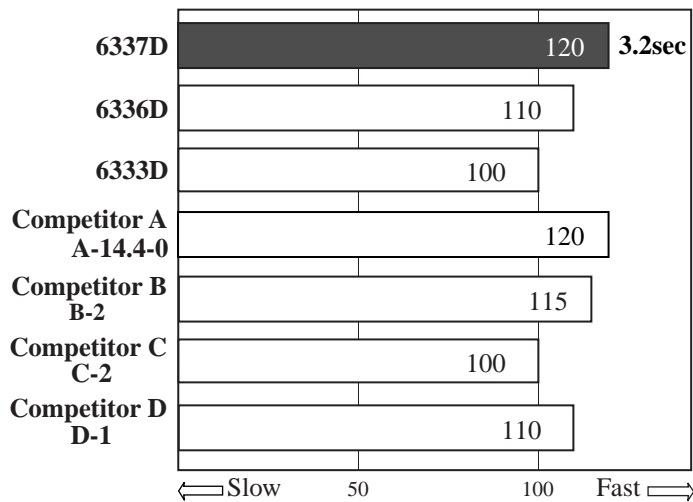
### The Number of Screws Driven/ Holes Drilled on a Single Full-Charge


● **Test 3:** Drilled holes in 38mm (1-1/2") thick Spruce; with 1" Auger bit  ; on Low speed drill mode.

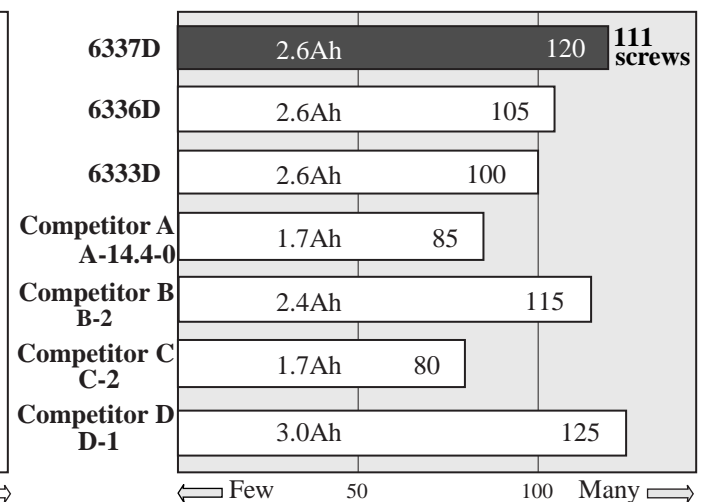
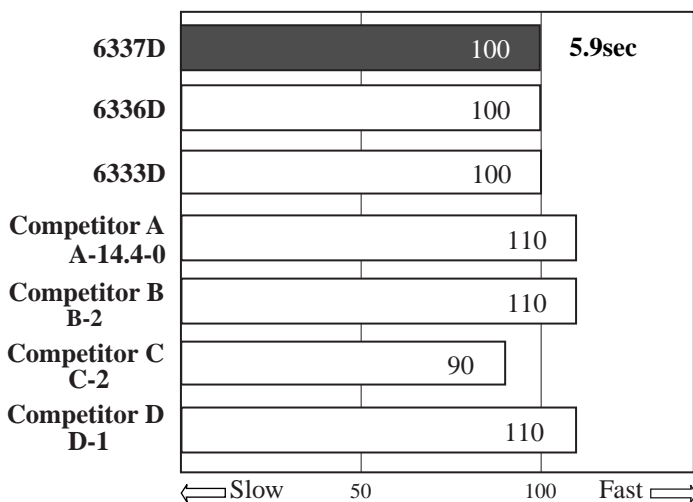


● **14.4V Models** (Numbers on the bars below are relative values when the capacities of 6333D are indexed at 100.)

● **Test 1:** Drilled holes in 38mm (1-1/2") thick Spruce; with 7/8" Spade bit  ; on High speed drill mode.




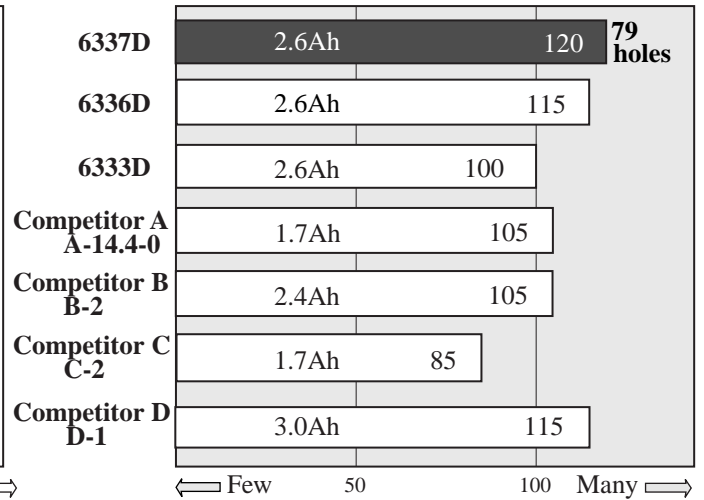
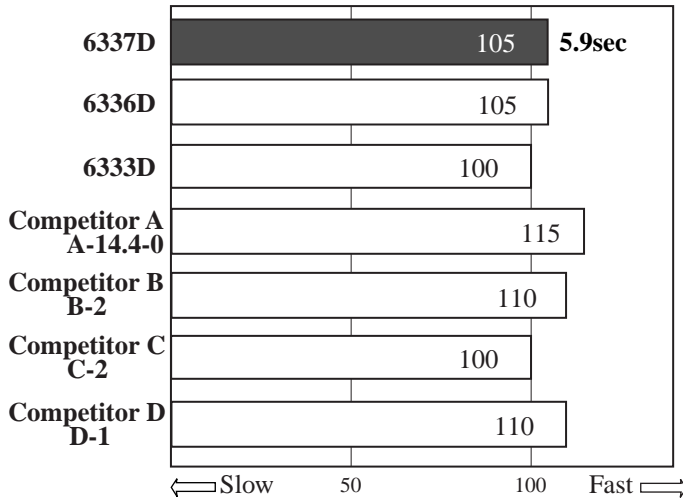
● **Test 2:** Drove 1/4" x 3" Lag bolts  ; into Spruce; on Low speed screwdriver mode.




### Time Required for Driving a Screw/ Drilling a Hole

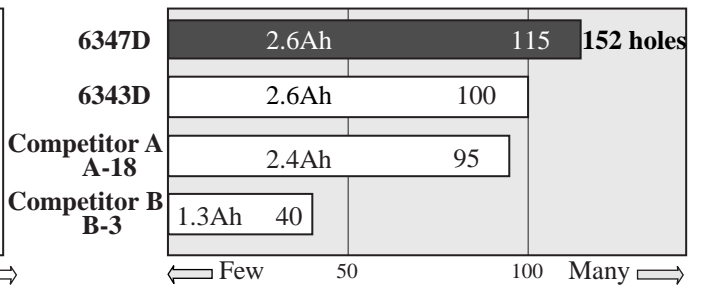
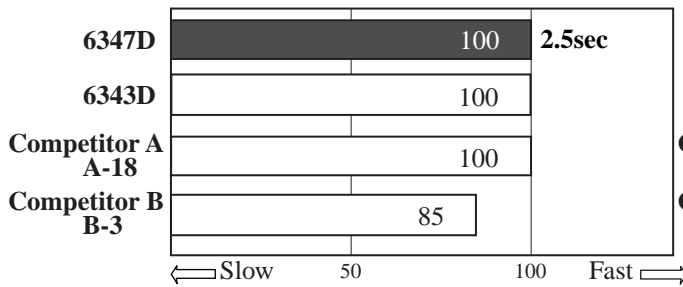
### The Number of Screws Driven/ Holes Drilled on a Single Full-Charge


- **Test 3:** Drilled holes in 38mm (1-1/2") thick Spruce; with 1" Auger bit  ; on Low speed drill mode.

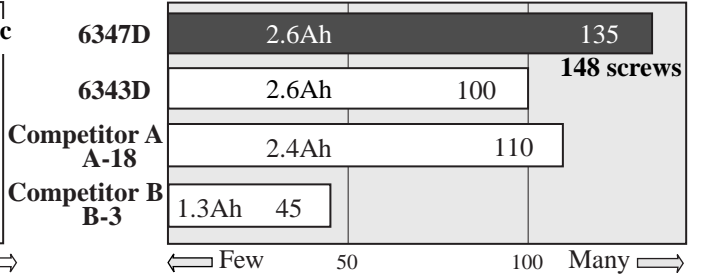
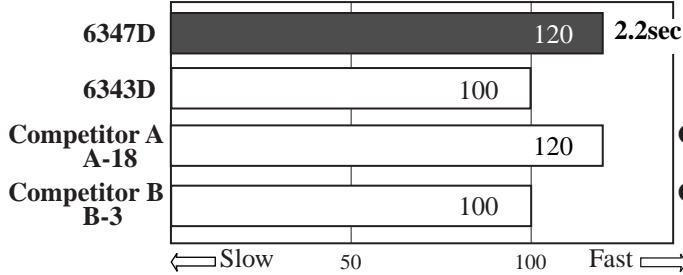



- **18V Models** (Numbers on the bars below are relative values when the capacities of 6343D are indexed at 100.)

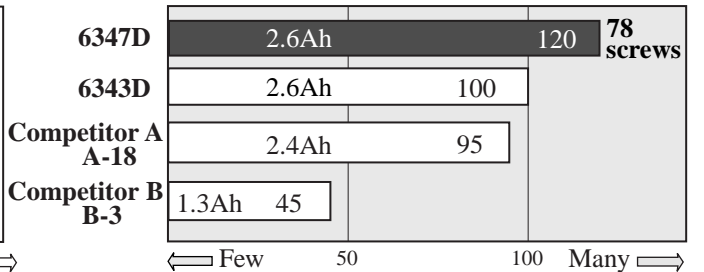
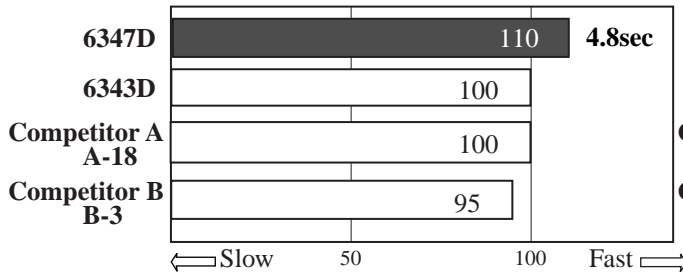
- **Test 1:** Drilled holes in 38mm (1-1/2") thick Spruce; with 7/8" Spade bit  ; on High speed drill mode.




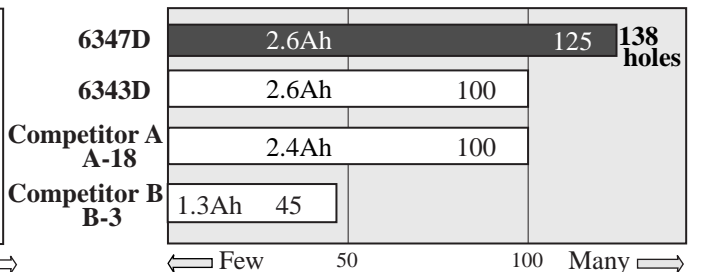
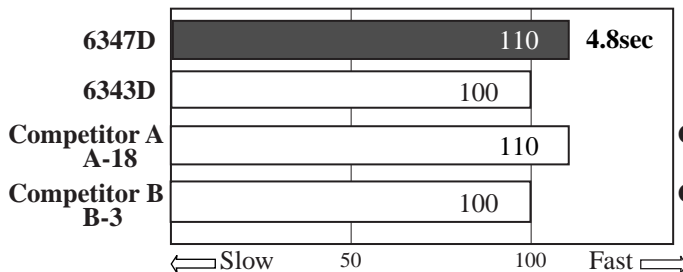
- **Test 2:** Drove 1/4" x 3" Lag bolts  ; into Spruce; on High speed screwdriver mode.



- **Test 3:** Drove 3/8" x 3-1/2" Lag bolts  ; into Spruce; on Low speed screwdriver mode.



- **Test 4:** Drilled holes in 38mm (1-1/2") thick Spruce; with 1" Auger bit  ; on Low speed drill mode.



## ► Hint on setting torque

### ● Selecting Optimum Torque

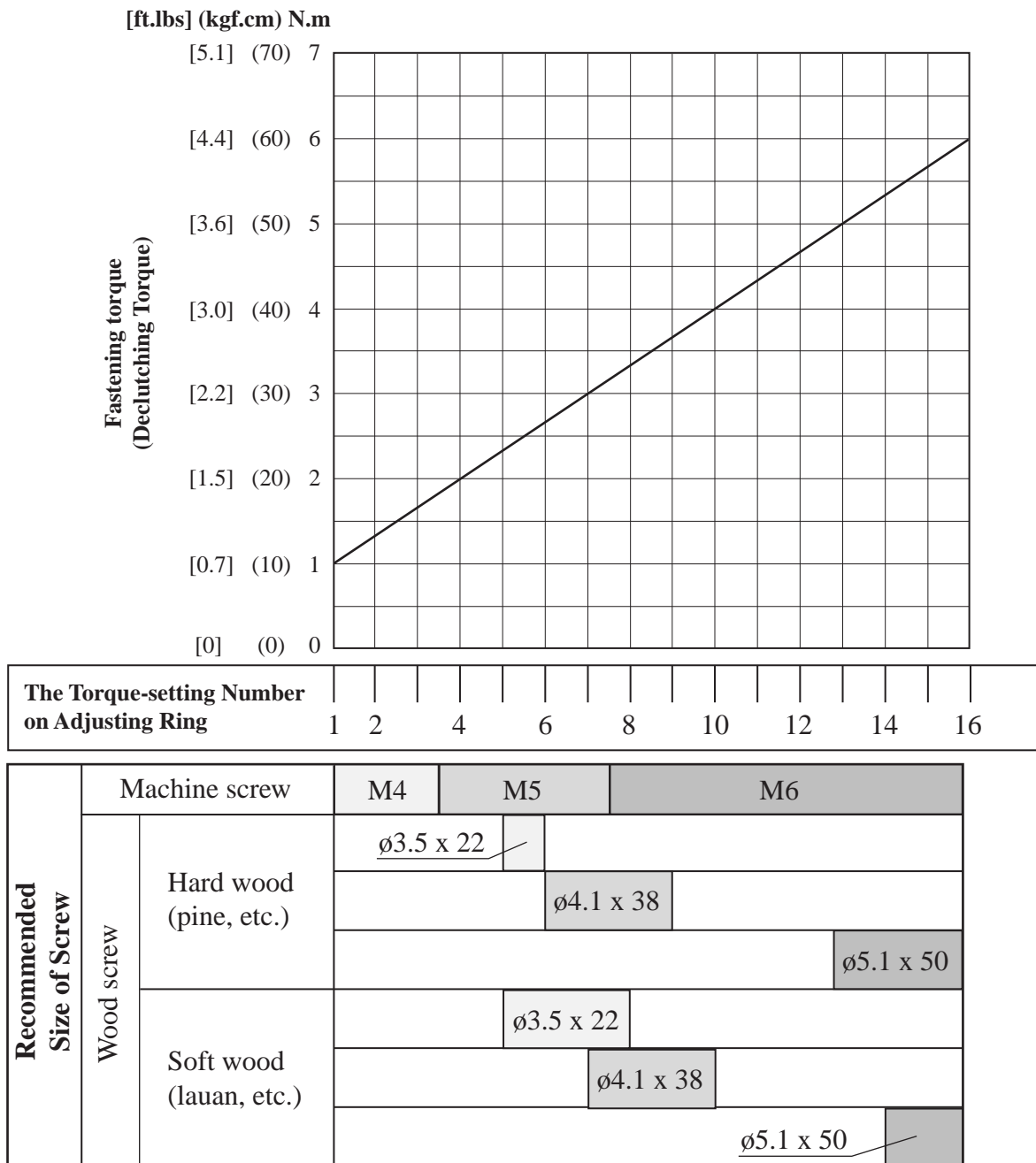
The graph below shows the relation between the torque-setting number on adjusting ring and fastening torque (= declutching torque), and the chart below the graph shows what number on the adjusting ring is optimum for the screw to drive. Please refer to them when selecting torque; they will help you choose an optimum torque-setting number to suit the screw to drive.

(The graph and the chart are available to all tools of Model 6207D series.)

Note: Actual fastening torque is not on the theoretical line of the graph.

### ● Advantages of 16 Torque Settings

- Optimum torque can be set for every size of machine screw from M4 to M6.
- Wood screws can be driven with their heads flush with each other more precisely than ever even though the screws vary in thickness or length, or the wood workpieces vary in hardness.



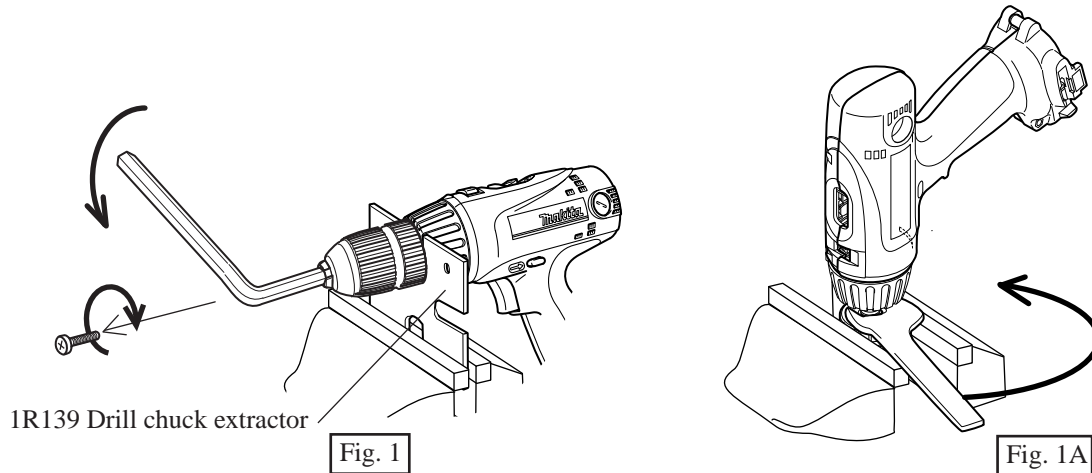
## < 1 > Disassembling of drill chuck See Fig. 1.

For replacing gear assembly, drill chuck has to be disassembled.

Take the following steps.

1. Firmly hold No.1R139 "Drill chuck extractor" with vise. And lock spindle with the drill chuck extractor.
2. Open the jaws of drill chuck fully and take off flat head screw M6 x 22 by turning clockwise.
3. Disassemble drill chuck with hex wrench inserted into drill chuck by turning the hex wrench anti-clockwise.

If drill chuck is damaged, firmly hold the drill chuck with vise and turn spindle with wrench anti-clockwise as illustrated in fig. 1A.

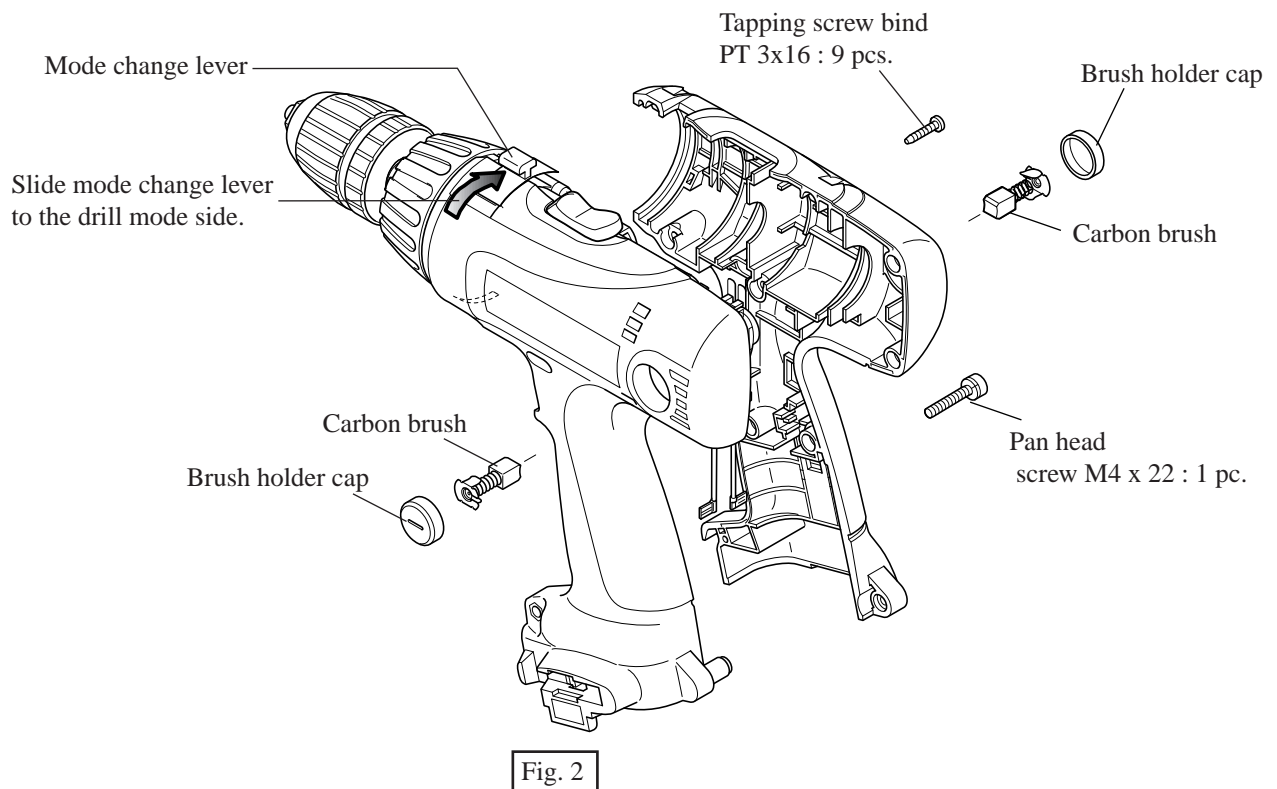


### < Note >

For replacing other than gear assembly, it is not necessary to disassemble drill chuck.

## < 2 > Disassembling housing See Fig. 2.

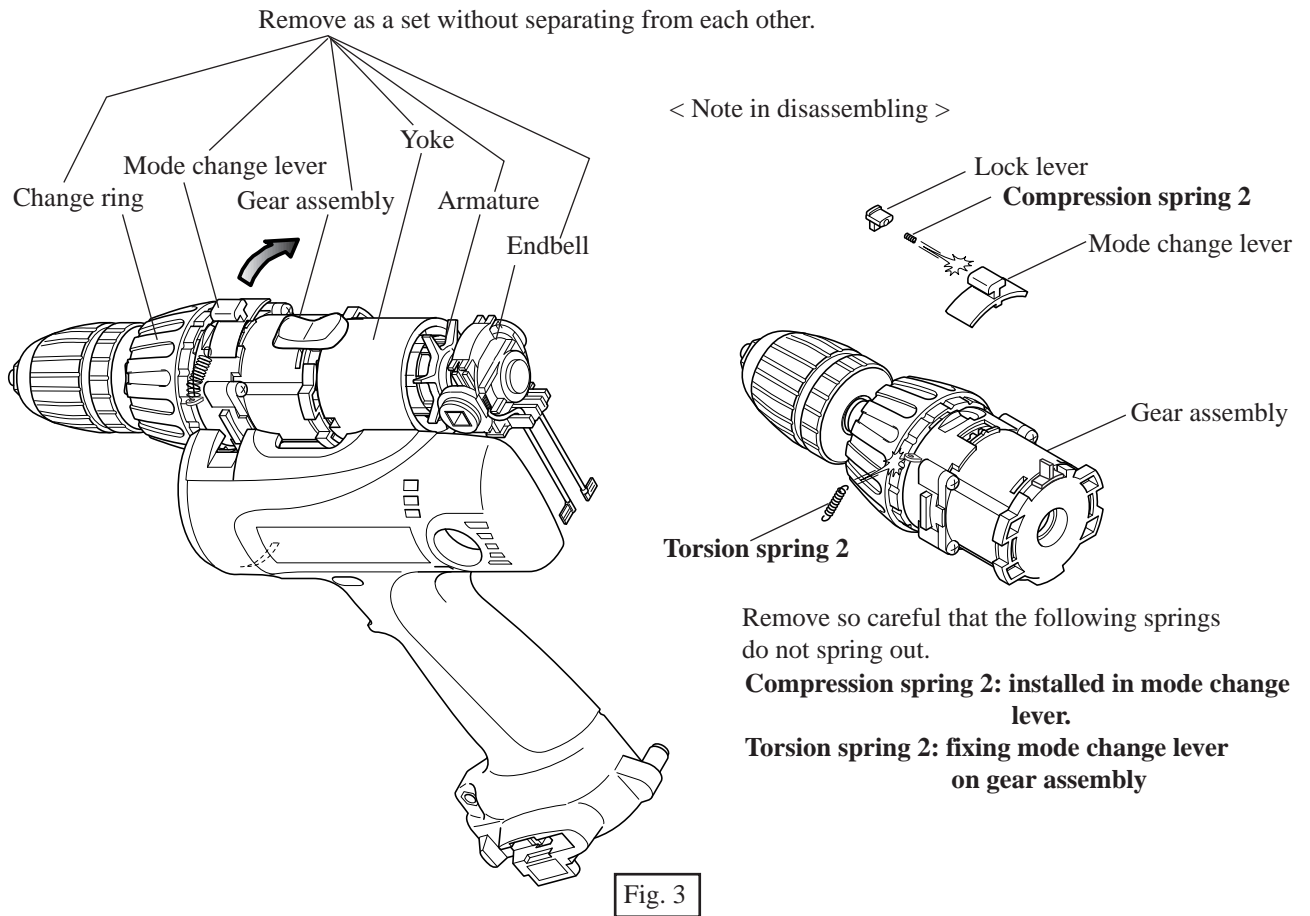
1. Take off brush holder caps and carbon brushes.
2. Slide mode change lever to the drill mode side.
3. Unscrew the following screws.
  - \* Tapping screw PT 3 x 16 : 9 pcs.
  - \* Pan head screw M 4 x 22 : 1 pc.





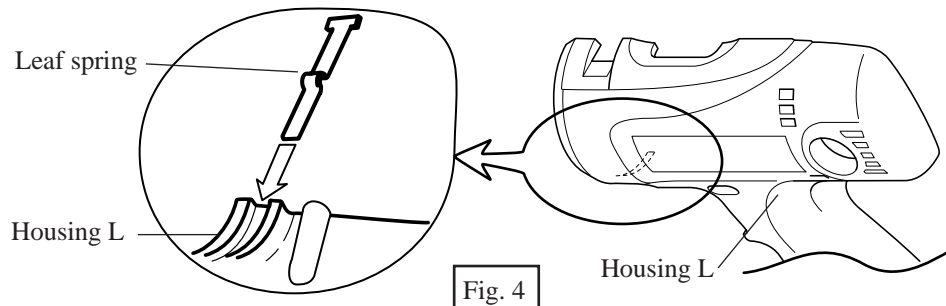
## < 3 > Disassembling gear assembly and motor section See Fig. 3.

Lifting up mode change lever, separated change ring, gear assembly, yoke, armature and endbell from housing as a set.



## < 4 > Assembling leaf spring See Fig. 5.

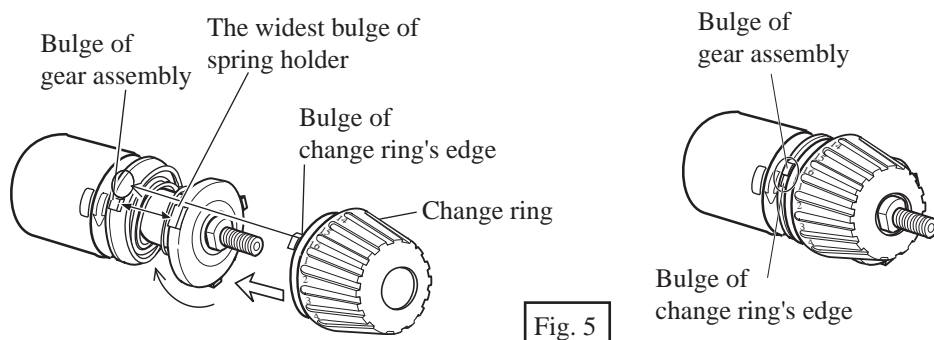
Assemble leaf spring to housing L as illustrated in Fig. 4.



## < 5 > Assembling change ring

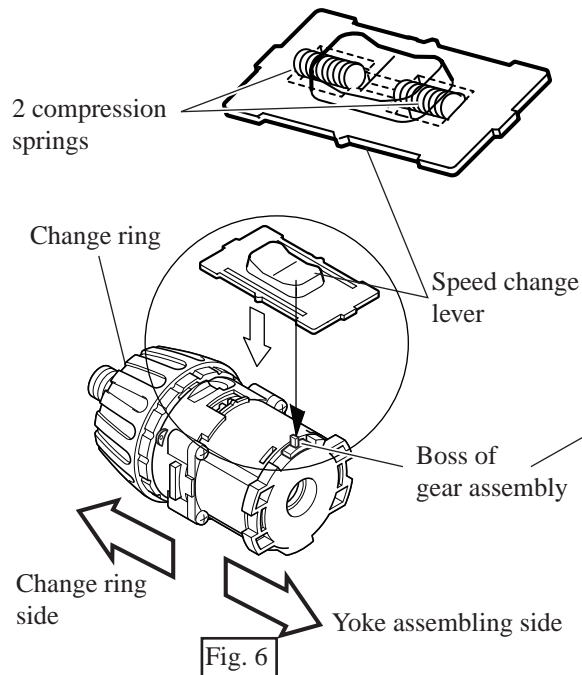
When separating gear assembly from housing, change ring can easily slip off from gear assembly. Re-assemble change ring to gear assembly as follows.

1. Align the widest bulge of spring holder to the bulge of gear assembly by turning spring holder.
2. Assemble change ring by aligning the bulge of change ring's edge to the portion of gear assembly marked with circle by the bulge of gear assembly.

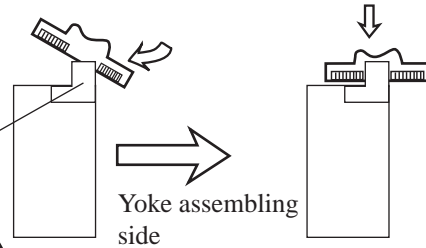


## < 6 > Assembling speed change lever

1. Before assembling, make sure that 2 compression springs are installed in the speed change lever. See fig. 6.
2. Assemble speed change lever to the boss of gear assembly as illustrated in Fig. 6A.
3. After assembling, slide the speed change lever to the change ring side or yoke assembling side and keep its slid position.

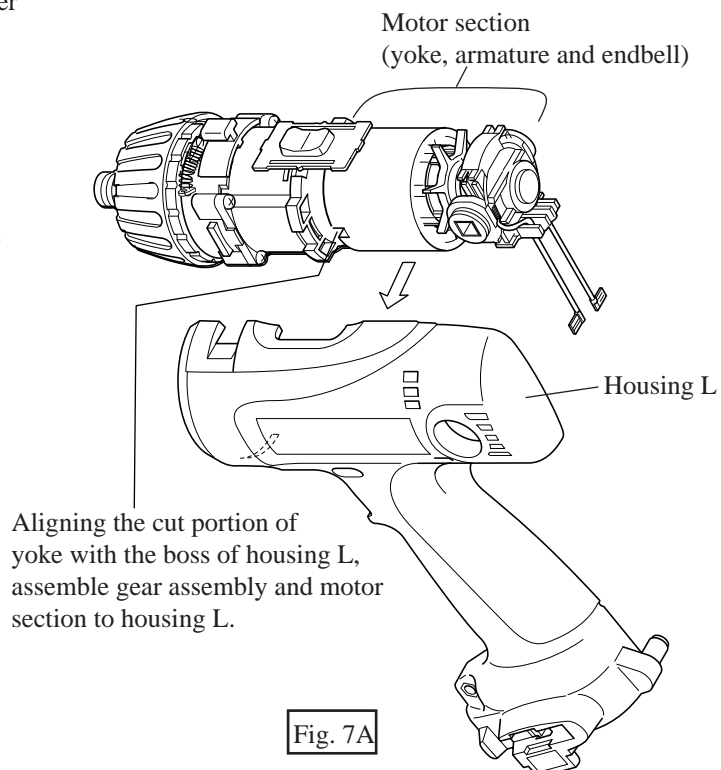
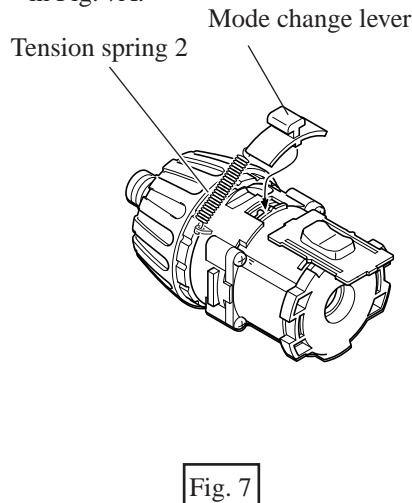


For assembling speed change lever, approach from yoke assembling side. And press speed change lever to the boss of gear assembly.

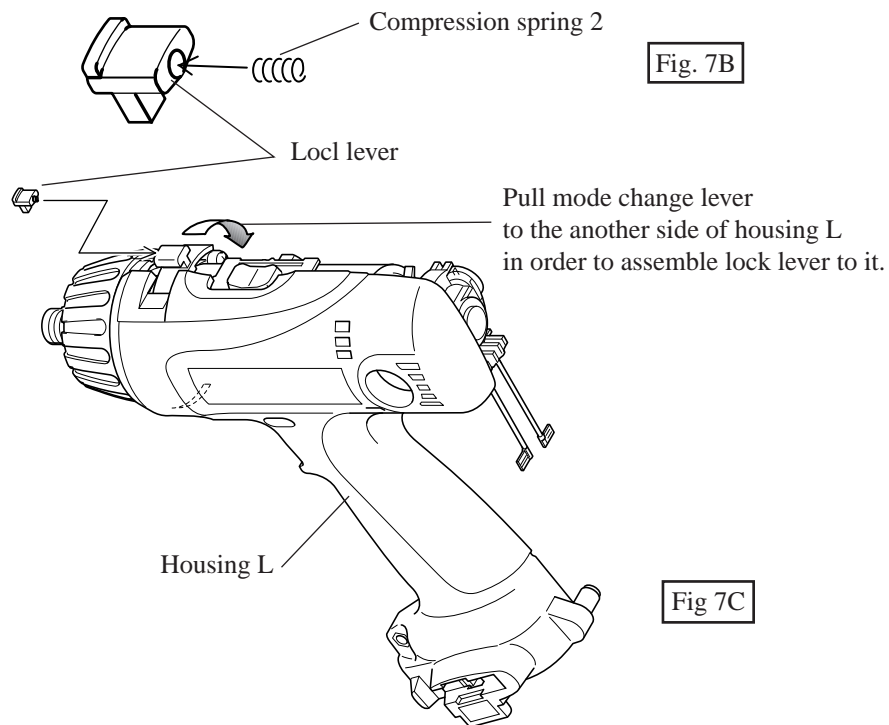


## < 7 > Assembling mode change lever and housing

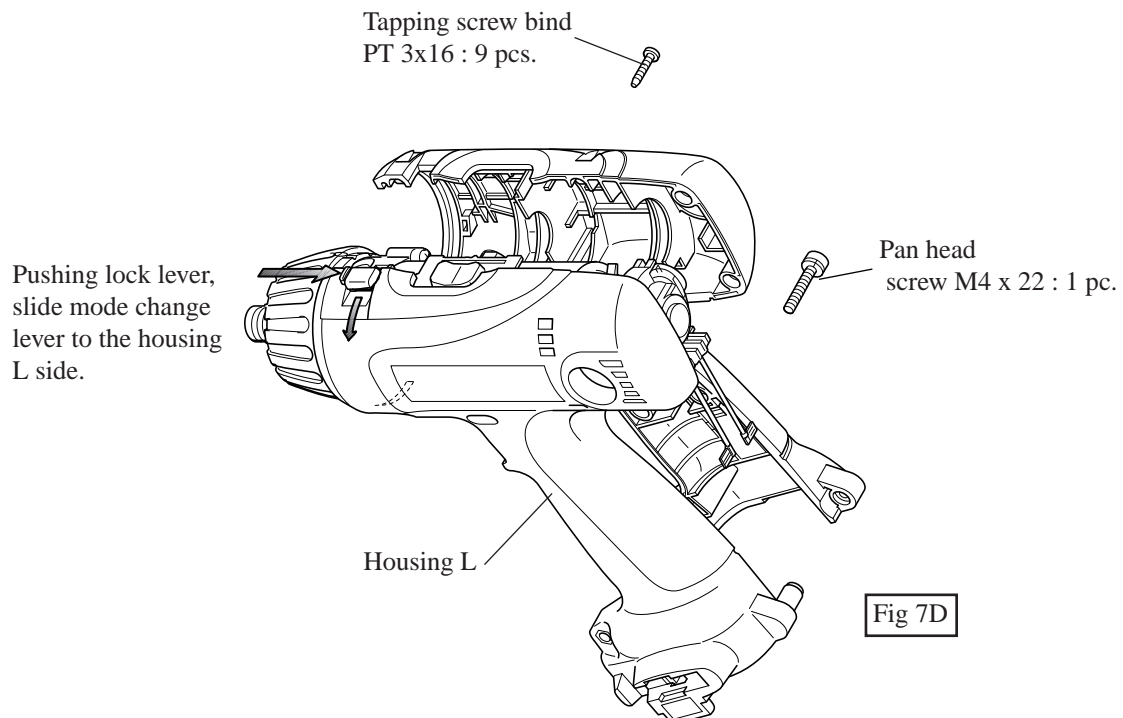
1. Hitch the hook of tension spring 2 to gear assembly and another hook to mode change lever as illustrated in Fig. 7.
2. Assemble mode change lever to gear assembly by inserting the boss of mode change lever into the groove of gear assembly as illustrated in Fig. 7.
3. Assemble motor section (yoke, armature and endbell) to gear assembly. Assemble them to housing L as illustrated in Fig. 7A.



4. Assemble compression spring 2 to lock lever as illustrated in Fig. 7B. Pulling mode change lever to the another side of housing L along the surface of gear assembly, insert the lock lever into mode change lever as illustrated in Fig 7C.



5. Pushing lock lever, slide mode change lever to the another side of housing L, and assemble housing R to housing L by fastening screws as illustrated in Fig 7D.



< 8 > Assembling drill chuck See Fig. 8.

1. Firmly hold No.1R139 "Drill chuck extractor" with vise. And lock spindle with the drill chuck extractor.
2. Hold No.1R298 "Hex socket" with the jaws of drill chuck firmly and turn the hex socket with No.1R223 "Torque wrench" clock wise.

<Note> Pre-setting the fastening torque for torque wrench : 49 N.m - 58.8 N.m

3. Fasten flat head screw M6 x 22 by turning it anti-clockwise.

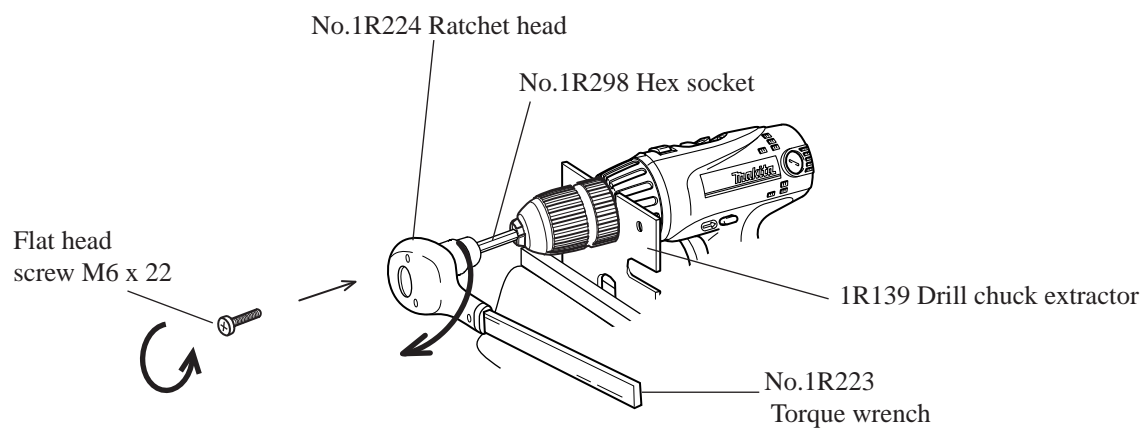
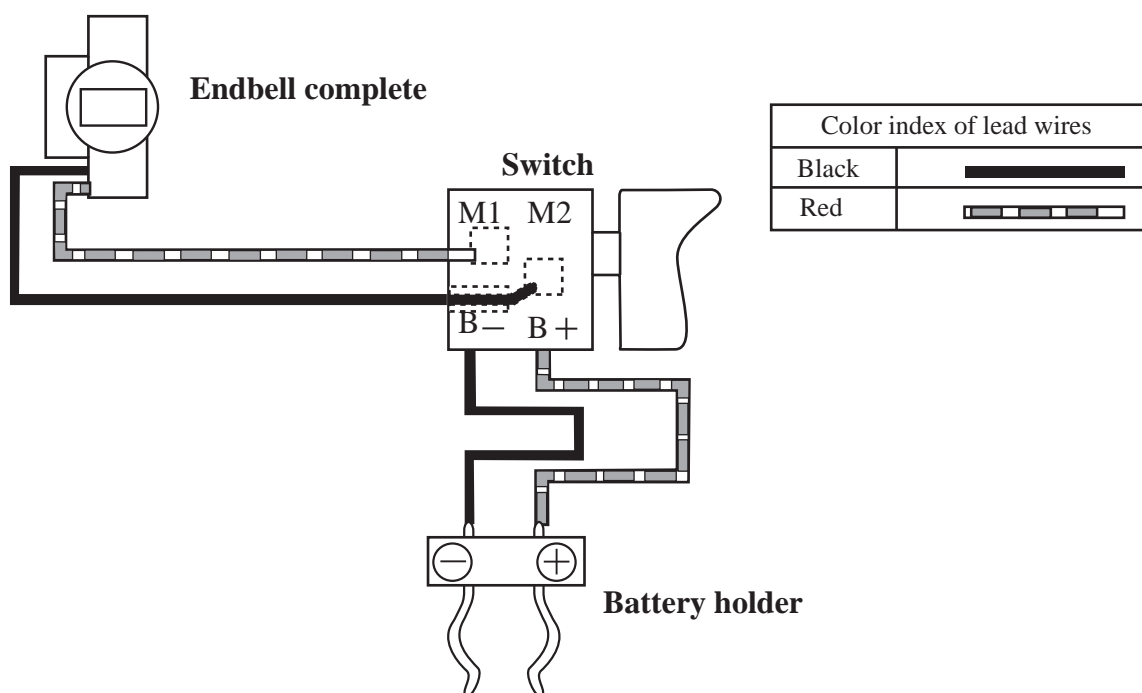


Fig. 8

## ► Circuit diagram



## ► Wiring diagram

