



YAMAHA

MOTORCYCLE

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DT100A/125A/175A

ASSEMBLY MANUAL



This manual has been written by Yamaha Motor Company for use by Authorized Yamaha Dealers and their qualified mechanics. In light of this purpose it has been assumed that certain basic mechanical precepts and procedures inherent to our product are already known and understood by the reader. Without such basic knowledge, incorrect assembly of one of the models listed within these pages could occur. This may render the machine unsafe.

The dealer is further cautioned to review the Service Manual for the machine being assembled in order to acquaint himself with the servicing procedures on the machine after assembly has been completed.

The Research and Service Departments of Yamaha are continually striving to further improve all models manufactured by the company. Modifications are therefore inevitable and changes in specifications or procedures mentioned within this manual will be forwarded to all Authorized Yamaha Dealers and will, where applicable, appear in future editions of this manual.

Should the dealer note a difference between the information in this manual and the actual model, he is advised to contact the U.S. Distributor, YAMAHA INTERNATIONAL CORPORATION (CANADA Distributor: YAMAHA MOTOR CANADA LTD.) per established routine for clarification.

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YAMAHA DT100A/125A/175A

ASSEMBLY MANUAL

1st Edition, October 1973

SERVICE DEPARTMENT

YAMAHA MOTOR CO., LTD.

IWATA, JAPAN

LIT-11664-37-01

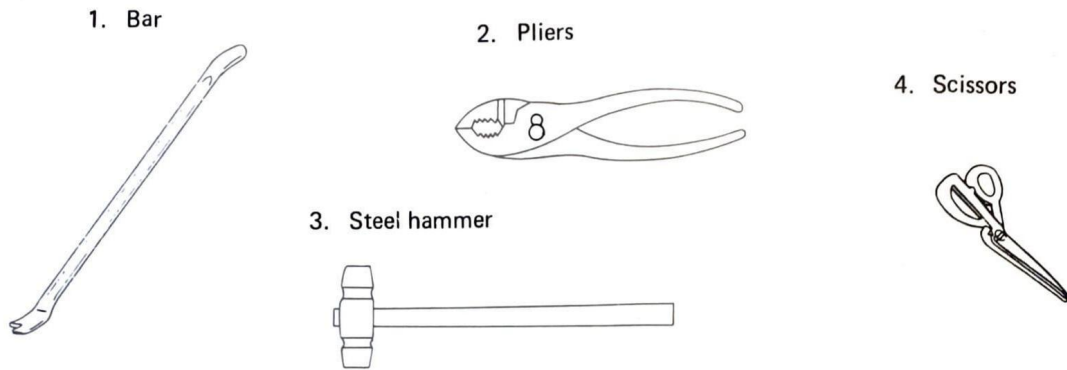
FOREWORD

This manual combines general assembly procedures of the Yamaha DT100A, 125A and 175A, but the description is centered on the DT175A. The differences between the DT175A and other models are explained, as required.

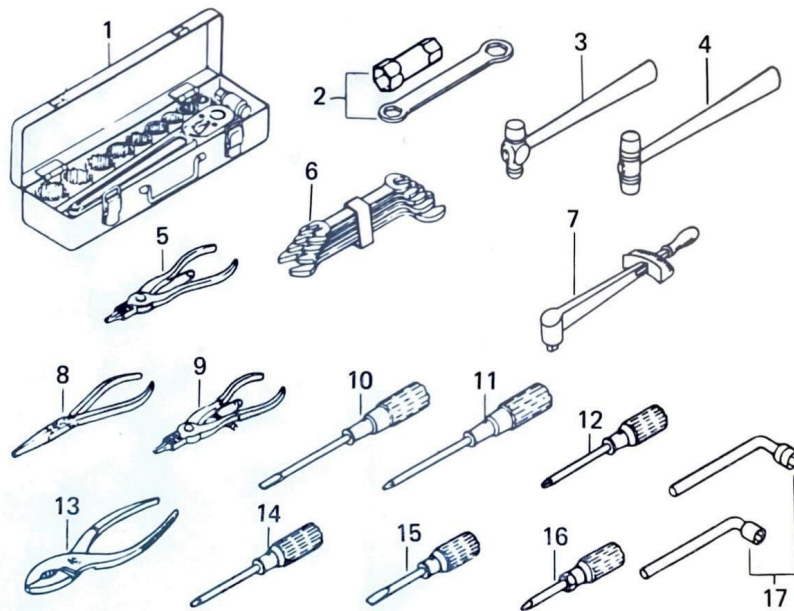
1. Tools and Lubricant

A. Tools for Unpacking

To uncrate the motorcycle, the following tools are required.



B. Tools for Assembling General tools



1. Set of socket wrenches
2. Plug wrench
3. Steel hammer
4. Soft-faced hammer
5. Circlip pliers (ST type)
6. Set of open-end wrenches
7. Torque wrench
8. Needle nose pliers
9. Circlip pliers (RT type)

10. Slotted-head screw driver (large)
11. Phillips-head screw driver (large)
12. Phillips-head screw driver (medium)
13. Pliers
14. Slotted-head screw driver (medium)
15. Slotted-head screw driver (small)
16. Phillips-head screw driver (small)
17. L-type socket wrench

C. Lubricant

The charts on the following page show the amount and type of lubricant to be used on the various component parts of the motorcycle. The list below describes the type of lubricant to be used. The chart is keyed accordingly.

1. (1) Use Yamalube, or (2) a good 20 or 30 weight two-cycle oil for air-cooled engines, or (3) a quality, detergent, automotive 10W-30 oil type "SD" (in that order of preference).
2. Preferably, a commercial front fork oil manufactured by a name-brand firm should be used. Secondly, follow the Service Manual recommendations.
3. Under average conditions, a dry-film graphite lubricant works best. Several commercial brands are available. Under conditions of exceedingly high humidity or rain, wet-film or 10W-30 motor oil lubricants provide better lubrication and protection against rust, etc. Personal experience for your locale is best in this case.
4. 10W-30 Detergent automotive oil type "SD" for best all-round use. Follow Service Manual recommendations for extreme variations in temperature. (NOTE Use 10W-30 in TX750).
5. Use Lithim soap-base grease (white grease).
6. Use standard HP lube grease.
7. Use (1) graphite base lubricant or commercial cable lubricant or, (2) 5W-20 motor oil. (See #3 above regarding extreme situations).

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Oil



Grease



Wiping material



Grease gun



Oil jug

1-7) Lubricant (see-above) 8) Wiping material 9) Grease gun 10) Oil jug

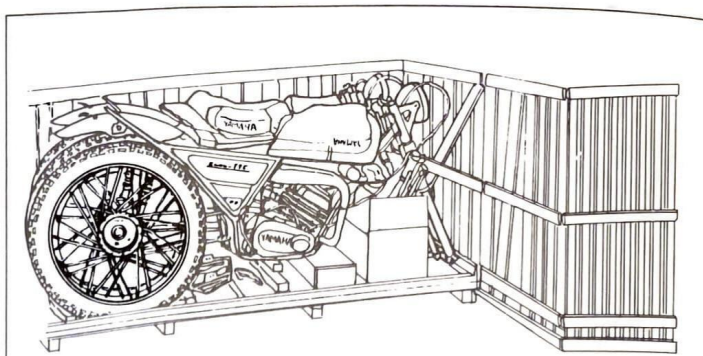
NOTE

Regarding lubricants:

Recommendations regarding type of lubricant to use (and period) are based upon averages only. Extremes in environment or usage dictate differing lubricants and periods. Therefore, all recommendations regarding type and period are to be considered a guide only and should be adjusted according to existing conditions. Period recommendations should be considered maximum permissible intervals and not exceeded; although conditions may dictate lesser intervals.

2. Unpacking

The DT100 is packed in a card board crate, but the DT125 and 175 are packed in a wire band crate. To unpack, tools such as steel bar, hammer, scissors and pliers are needed, but no special tools are required. To unpack the wire band crate, the two sides of the crate must be removed first. (See the illustration right.)



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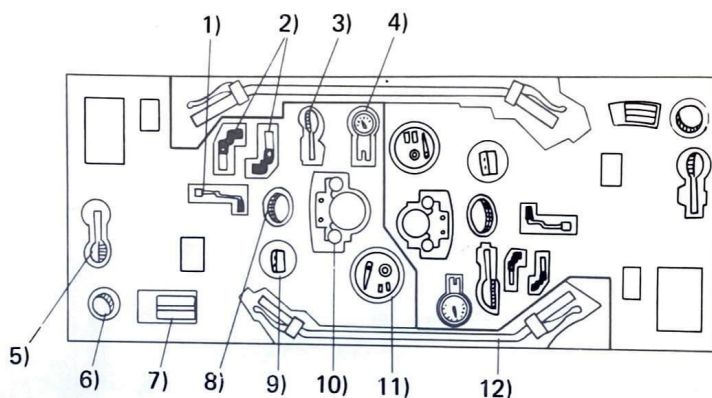
3. Packed Contents and Checking

It is necessary to check the frame and other parts for damage, scratches and missing.

DT100A Packing List (Sthyrol)

1. Foam styrol package

Part are contained in the foam styrol package as shown below. Check these parts for defects and missing.



- 1) Change arm
- 2) Foot rest
- 3) Rear flasher light
- 4) Meter complete
- 5) Rear flasher light
- 6) Front flasher light
- 7) Battery
- 8) Front flasher light

- 9) Vinyl bag
 - 6 mm x 15 mm bolt x 2 for speedometer — 1
 - 6 mm x plain washer x 2 for speedometer — 2
 - Foot rest fitting nut x 2 — 3
 - Foot rest bolt (8 mm x 35 mm) x 2 — 4
- 10) Taillight assembly
- 11) Front brake shoe plates
- 12) Handle-bar complete

2. Card board case

Back mirror
Foot rest cover
Owner's manual
Warranty guide book
Connector cover
Tool assembly
Vinyl bag

- | | | | |
|-----------------------|---|------------------|----|
| Flasher collars | 2 | For rear flasher | 5 |
| Seat pins | 2 | For seat | 6 |
| Seat pin stoppers | 2 | For seat | 7 |
| Hair pins | 2 | For seat | 8 |
| Cotter pin | 1 | For front axle | 9 |
| Nuts (8 mm) | 4 | | 10 |
| Spring washers (8 mm) | 2 | | 11 |

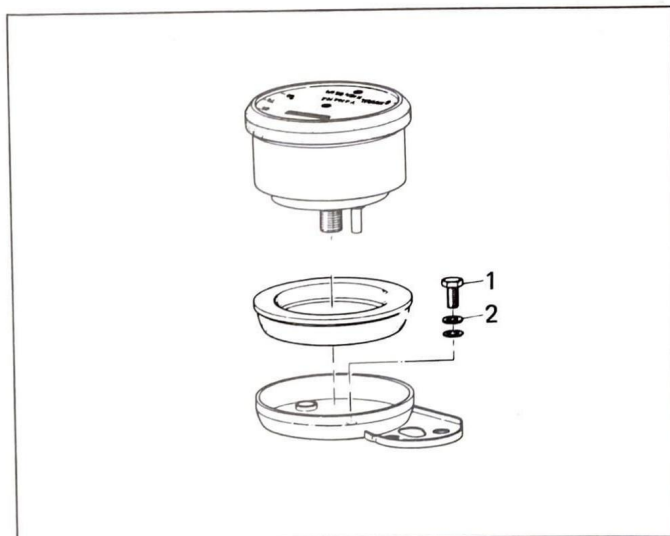
Vinyl bag

- | | | |
|--------------------------|---|----|
| Taillight damper | 1 | 12 |
| Leg shield washer (6 mm) | 1 | 13 |
| Spring washer (6 mm) | 1 | 14 |
| Plain washers (6 mm) | 2 | 15 |
| Nuts (6 mm) | 2 | 16 |
| Special washer (6 mm) | 1 | 17 |
| Damper | 1 | 18 |
| Damper collar | 1 | 19 |
| Special washer | 1 | 20 |
| Fitting bolts | 2 | 21 |
| Bolt (6 mm x 25 mm) | 1 | 22 |

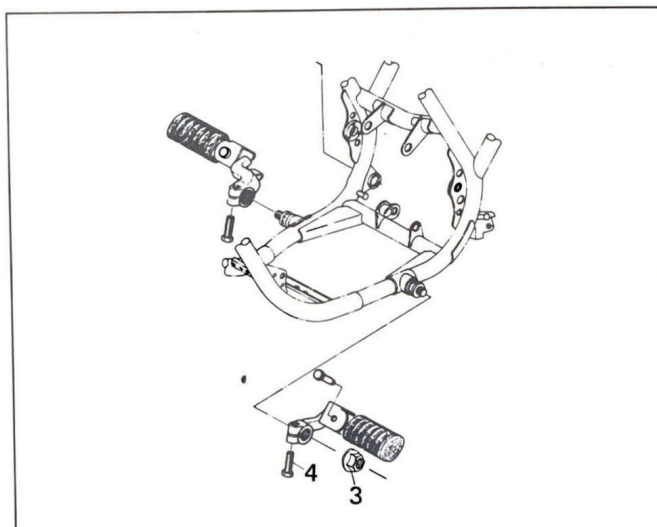
3. Front wheel
4. Rider's seat
5. Front fender

9) Vinyl bag

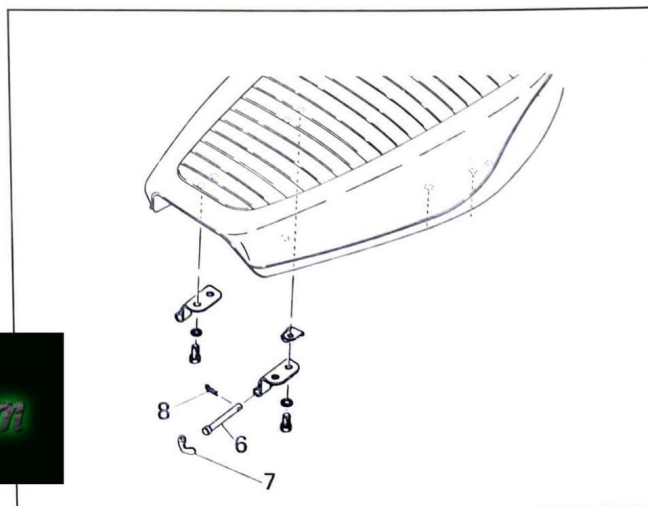
1. Bolt (6mmx 15mm) x 2
2. Spring washer (6mm) x 2



3. Footrest fitting nut x 2
4. Footrest bolt (8mm x 35mm) x 2

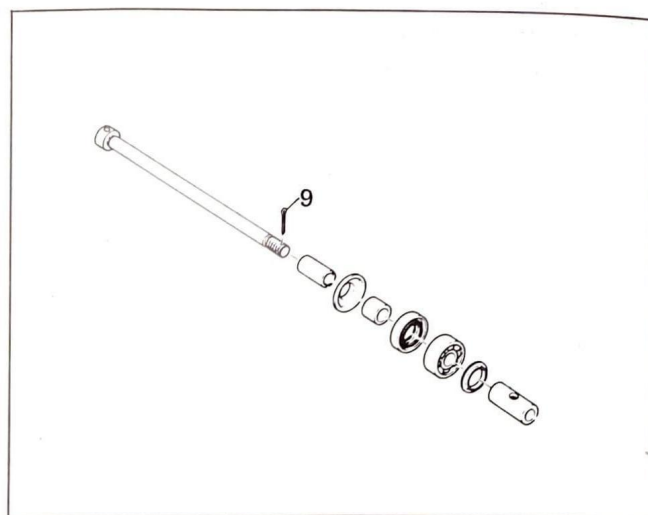


6. Sheat pin x 2
7. Sheat pin stopper x 2
8. Hair pin x 2

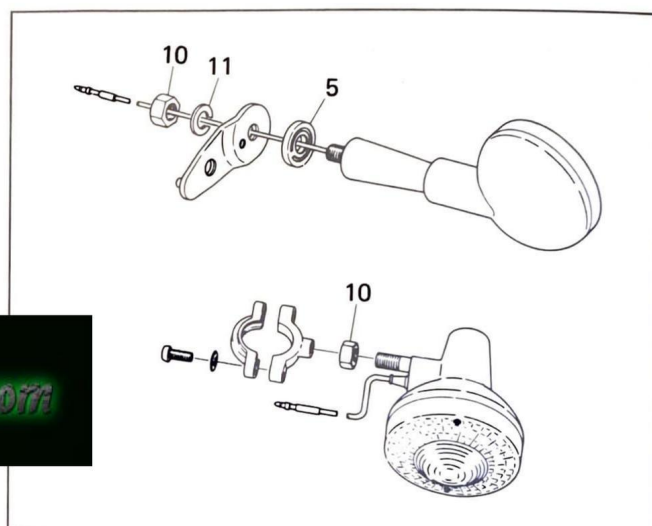


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9. Cotter pin x 1

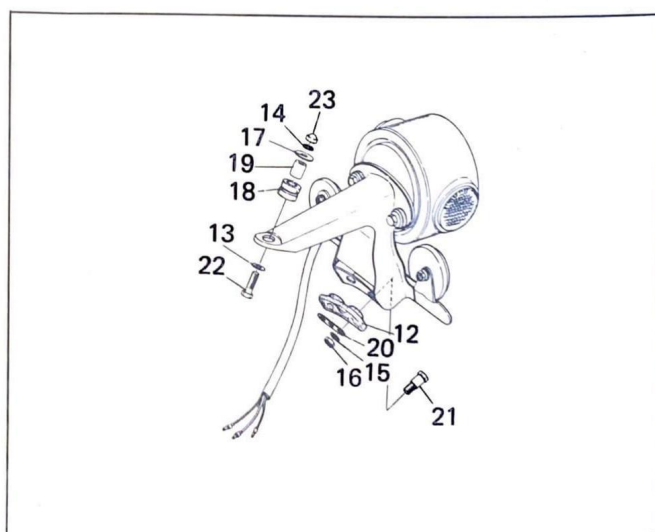


5. Flasher collar x 2
10. Nut (8mm) x 4
11. Spring washer (8mm) x 2



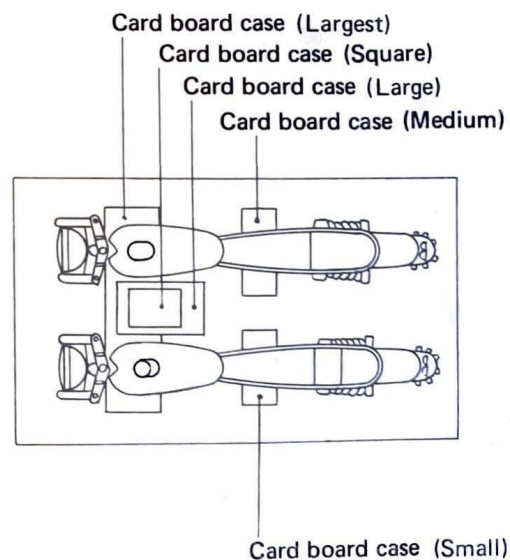
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12. Tail lamp dumper
13. Leg shield washer
14. Spring washer (6mm)
15. Plane washer (6mm)
16. Nut (6mm) x 2
17. Special washer
18. Dumper
19. Dumper collar
20. Special washer
21. Fitting bolt x 2
22. Bolt (16mm x 25mm)
23. Crown nut (6mm)



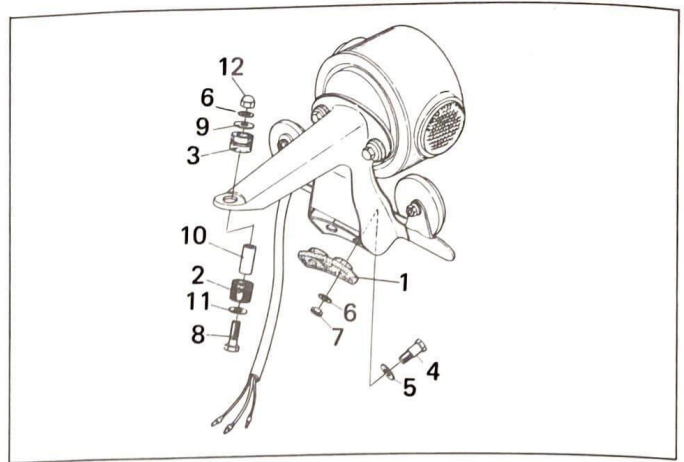
DT125A Packing List (Steel band)

- | | | | |
|------------------------------------|-----------------------------|----|-------------------------|
| 1. Card board case (Largest) | | | |
| Handlebars | 2 | | |
| Foot rests | 2 | | |
| Change arms (Vinyl bag) | 2 | | |
| Card board case (Medium) | 1 | | Refer to 3 and 8 below. |
| Card board cases (meter Ass'y) | 2 | | |
| 2. Card board case (Large) | | | |
| Taillight assembly | | | |
| 3. Card board case (Medium) | Small | | |
| Back mirror | 1 | | |
| Warranty guide book (only U.S.A.) | 1 | | |
| Owner's manual | 1 (including battery leads) | | |
| Tool set | 1 | | |
| Foot rest covers | 2 | | |
| Wire holder | 1 | 1 | |
| Connector cover | 1 | | |
| Vinyl bag (1) | | | |
| Taillight damper | 1 | 2 | |
| Damper | 1 | 3 | |
| Battery box damper | 1 | 4 | |
| Fitting bolts | 2 | 5 | |
| Plain washers (8 mm) | 2 | 6 | |
| Spring washers (6 mm) | 3 | 7 | |
| Nuts (6 mm) | 2 | 8 | |
| Bolt (6 mm x 35 mm) | 1 | 9 | |
| Leg shield washer | 1 | 10 | |
| Collar | 1 | 11 | |
| Special washer | 1 | 12 | |
| Crown nut | 1 | 13 | |
| Vinyl bag (2) | | | |
| Flasher collars | 2 | 14 | |
| Nuts (8 mm) | 4 | 15 | |
| Spring washers (8 mm) | 2 | 16 | |
| Bolts (10 mm for foot rest) | 2 | 17 | |
| Spring washers (for foot rest) | 2 | 18 | |
| Crown nuts (10 mm for sub-carrier) | 2 | 19 | |
| Seat pins | 2 | 20 | |
| Hair pins | 2 | 21 | |
| Stoppers | 2 | 22 | |
| Cotter pin (for axle) | 1 | 23 | |
| Bolt (6 mm for wire holder) | 1 | 24 | |
| Spring washer | 1 | 25 | |
| Plain washer (for wire holder) | 1 | 26 | |
| Bolts (6 mm x 30 mm) | 2 | 27 | |
| Washers (6 mm) | 2 | 28 | |
| Breather pipe | | | |
| 4. Card board case (Small) | | | |
| Front brake shoe plate assemblies | | 2 | |
| Hub dust covers | | 2 | |
| Collars | | 2 | |
| 5. Card board case (square) | | | |
| Front flasher lights | | 4 | |
| Rear flasher lights | | 4 | |
| 6. Foot rest assemblies | | 2 | |
| 7. Sub-carrier assemblies | | 2 | |
| 8. Rider's seats | | 2 | |
| 9. Front wheels | | 2 | |
| 10. Front fenders | | 2 | |



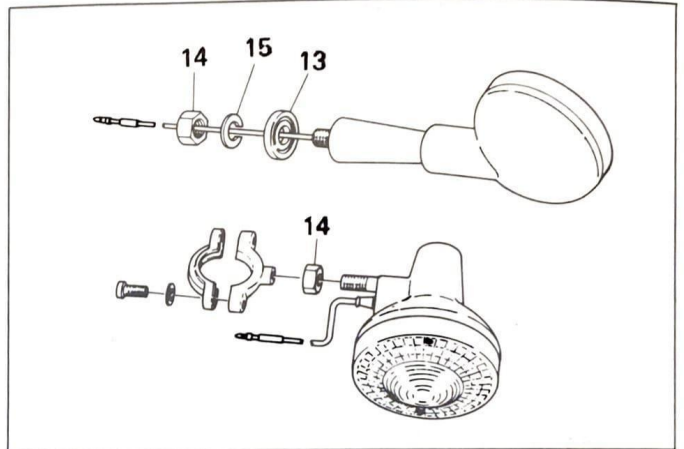
Vinyl bag (1)

1. Tail lamp dumper
2. Dumper
3. Battery box dumper
4. Fitting bolt x 2
5. Plain washer (8 mm) x 2
6. Spring washer (6 mm) x 3
7. Nut (6 mm) x 2
8. Bolt (6 mm x 55 mm)
9. Leg shield washer
10. Collar
11. Special washer
12. Crown nut

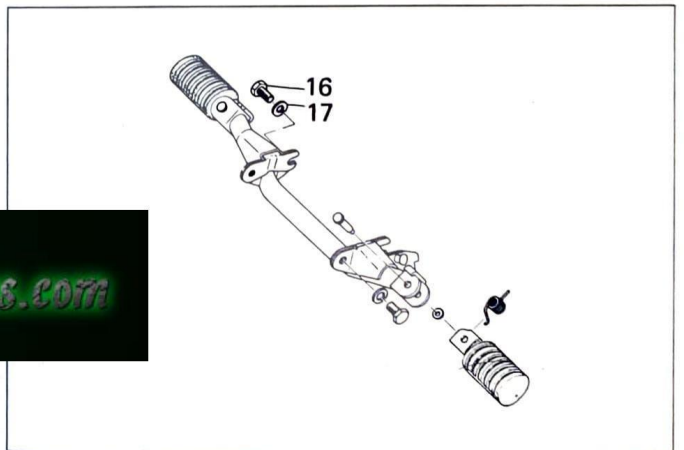


Vinyl bag (2)

13. Flasher collar x 2
14. Nut (8 mm) x 4
15. Spring washer (8 mm) x 2

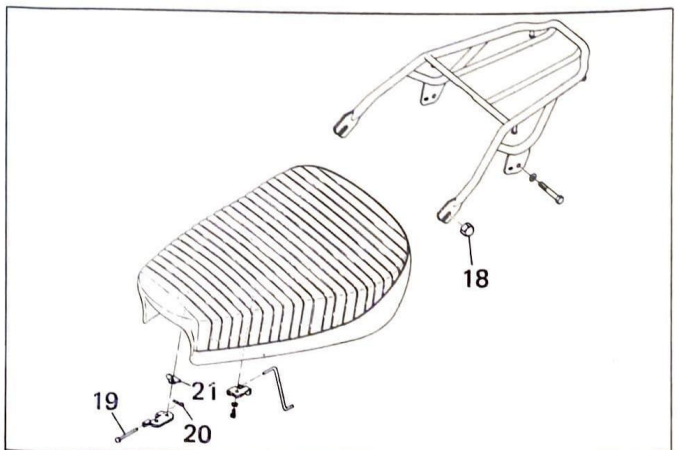


16. Bolt (10 mm) x 2
17. Spring washer (10 mm) x 2

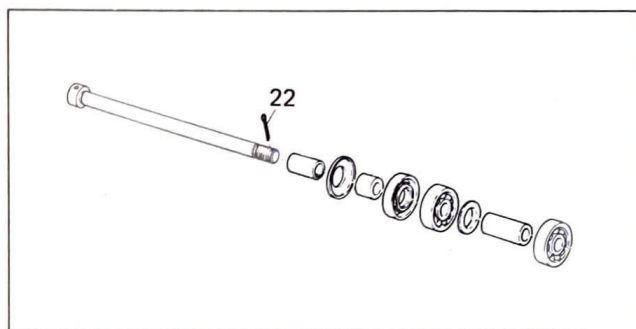


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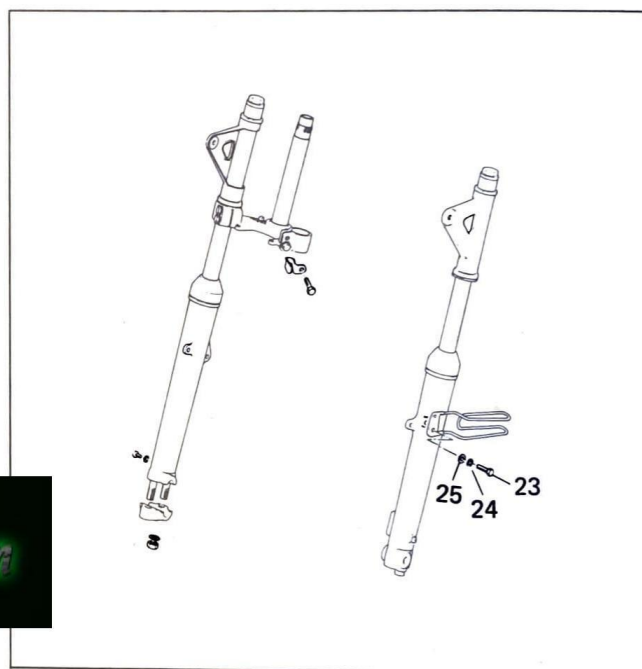
18. Crown nut (10 mm) x 2
19. Seat pin x 2
20. Hair pin x 2
21. Stopper x 2



22. Cotter pin

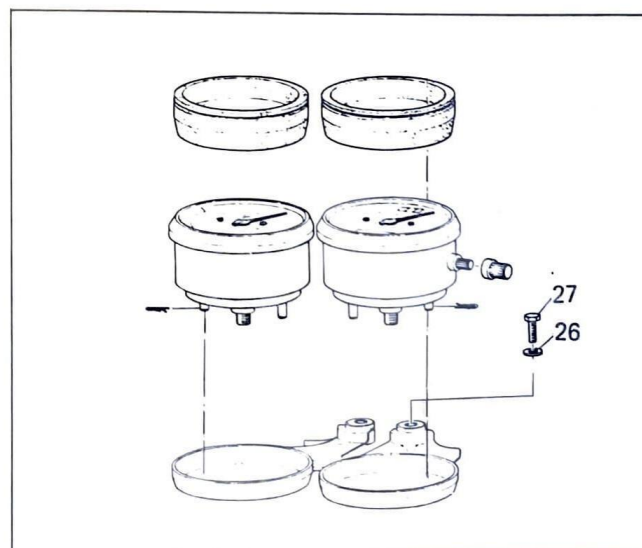


- 23. Bolt (6 mm)
- 24. Spring washer (6 mm)
- 25. Plain washer (6 mm)



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- 26. Spring washer (8 mm) x 4
- 27. Bolt (8 mm x 55 mm) x 2



DT175A Packing List

1. Card board case (Largest)

Handlebar completes	2
Rider's seat	1
Card board case (2 x meter panels)	1
Card board case (tools, back mirrors, etc.)	1
Vinyl bag (2 x change arms)	1
Vinyl bag (2 x foot rests)	1
Vinyl bag (1)	1
Bolts (6 mm x 30 mm)	2 ——— 1-
(for meter)	
Plain washers (6 mm)	2 ——— 2
(for meter)	
Spring washer (6 mm)	2 ——— 3
(for meter)	
Foot rest nuts (12 mm)	2 ——— 4
Foot rest bolts (8 mm)	2 ——— 5
Bolt (6 mm)	1 ——— 6
(for change arm)	

2. Card board case (Large)

Taillight assemblies	2
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3. Card board case (Medium)

Owner's manual	1
Warranty guide book (only U.S.A.)	1
Foot rest covers	2
Tool kit	1
Wire holder	1
Connector cover	1
Battery	1
Vinyl bag	1
Bolt	1 ——— 7
Leg shield washer	1 ——— 8
Leg shield washer	1 ——— 9
Spring washer (6 mm)	1 ——— 10
Crown nut (16 mm)	1 ——— 11
Collar	1 ——— 12
Damper	1 ——— 13
Fitting bolts	2 ——— 14
Special washer	1 ——— 15

Vinyl bag (1)

1. Bolt (6 mm x 30 mm) x 2
2. Plain washer (6 mm) x 2
3. Spring washer (6 mm) x 2

Plain washers (6 mm)	2 ——— 16
Nuts (6 mm)	2 ——— 17
Battery box damper	1 ——— 18
Vinyl bag (2)	
Seat pins	2 ——— 19
Hair pins	2 ——— 20
Stoppers	2 ——— 21
Bolt (6 mm x 18 mm)	1 ——— 22
Plain washer (6 mm)	1 ——— 23
Spring washer (6 mm)	1 ——— 24
Flasher collars	2 ——— 25
Nuts (8 mm)	
(for front and rear flasher)	4 ——— 26
Spring washers (8 mm)	
(for rear flasher and rear fender)	4 ——— 27
Bolts (8 mm x 55 mm)	
(for rear fender as dummy)	2 ——— 28
Cotter pin	
(for rear axle nut)	1 ——— 29

4. Card board case (small)

Front brake shoe plate assembly	1
Hub dust cover	1
Collar	1

5. Card board case (square)

Front flasher lights	4
Rear flasher lights	4

6. Sub-carrier assemblies

2

7. Rider's seat

1

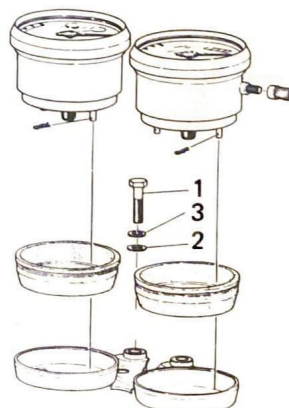
8. Front wheels

2

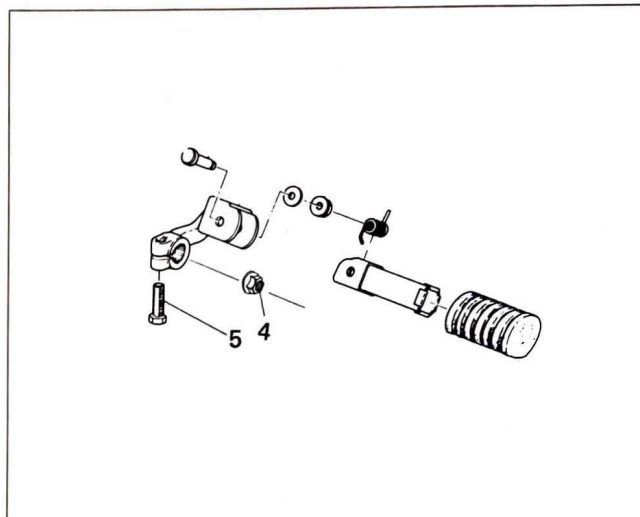
9. Front fenders

2

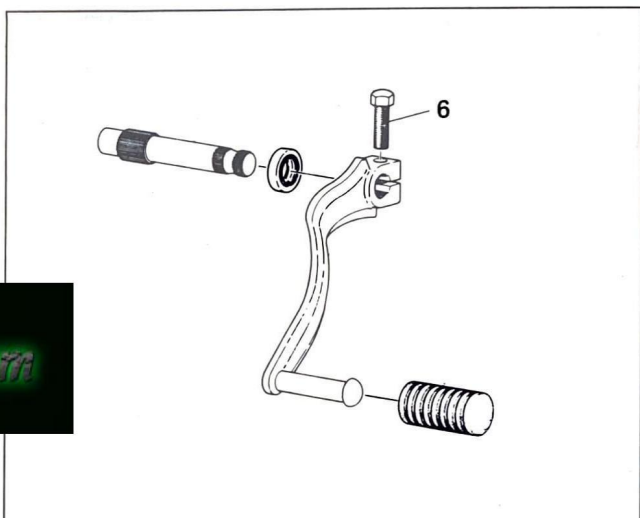
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- 4. Footrest nut (12 mm) x 2
- 5. Footrest bolt (8 mm) x 2



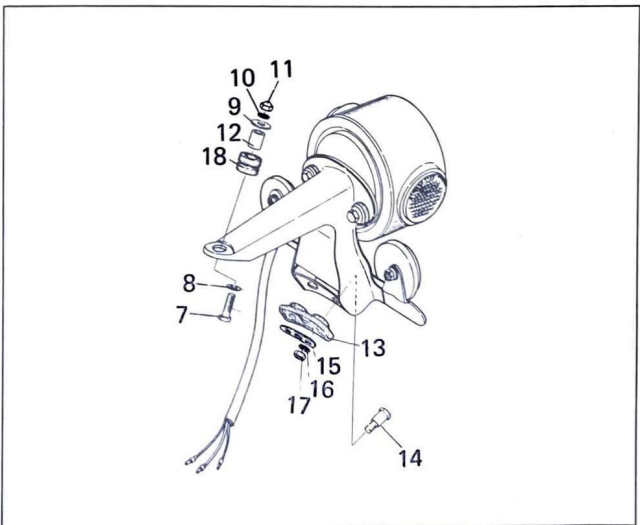
- 6. Bolt (6 mm)



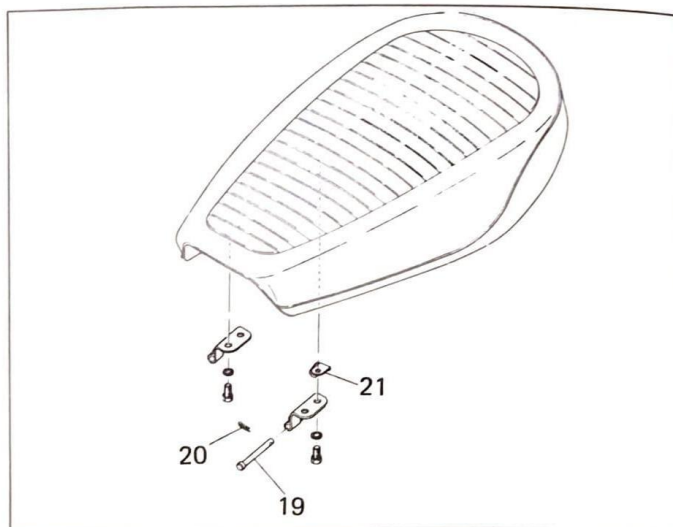
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Vinyl bag (2)

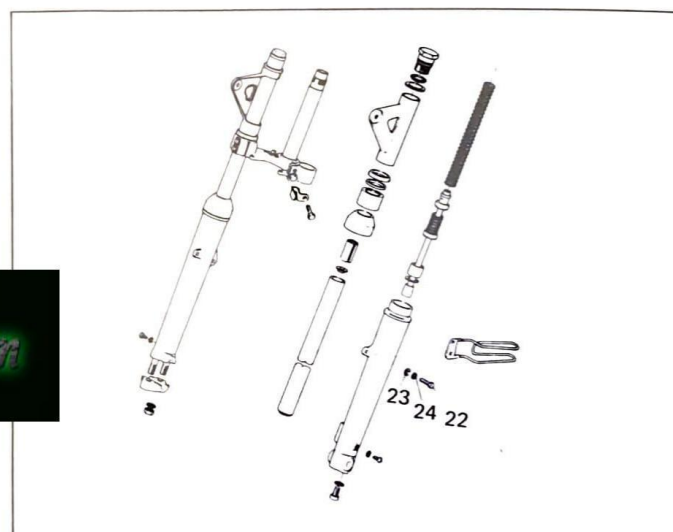
- 7. Bolt (6 mm)
- 8. Leg shield washer
- 9. Leg shield washer
- 10. Spring washer (6 mm)
- 11. Crown nut (6 mm)
- 12. Collar
- 13. Dumper
- 14. Fitting bolt x 2
- 15. Special washer
- 16. Plain washer (6 mm) x 2
- 17. Nut (6 mm) x 2
- 18. Battery box dumper



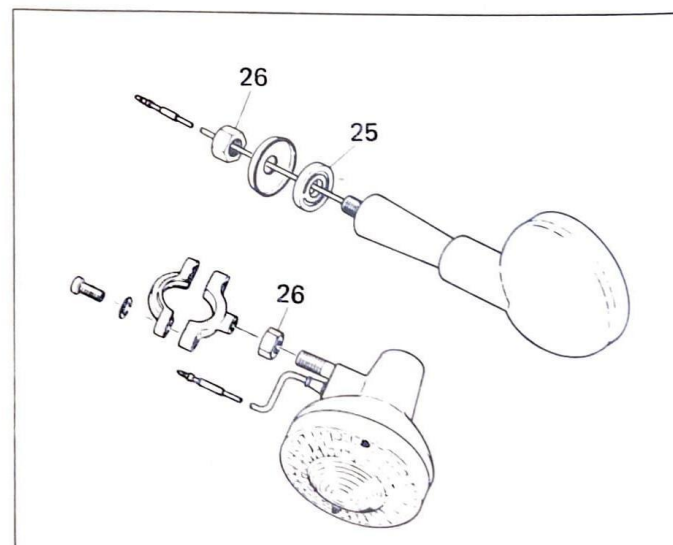
- 19. Seat pin x 2
- 20. Hair pin x 2
- 21. Stopper x 2



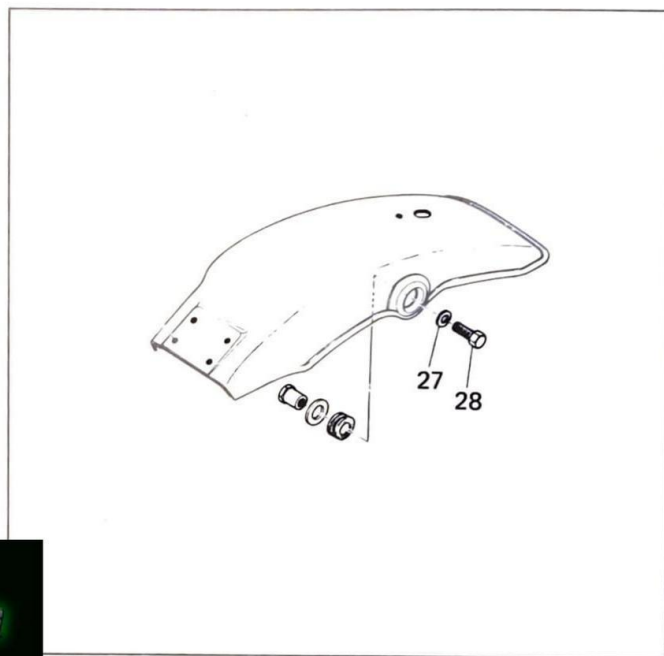
- 22. Bolt (6 mm x 18 mm)
- 23. Plain washer (6 mm)
- 24. Spring washer (6 mm)



- 25. Flasher collar x 2
- 26. Nut (8 mm) x 4

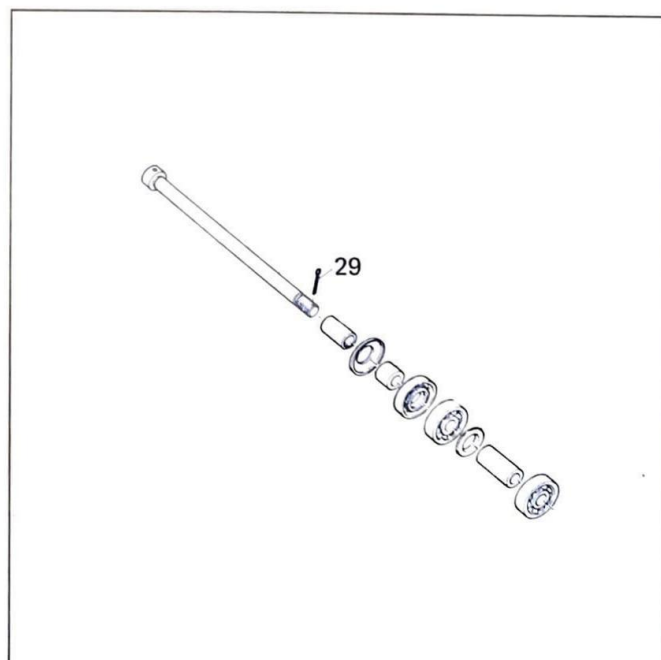


- 27. Spring washer (8 mm) x 4
- 28. Bolt (8 mm x 55 mm) x 2



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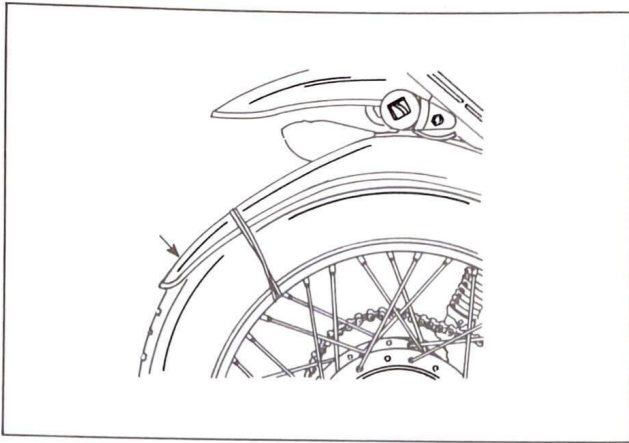
- 29. Cotter pin



4. Unpacking the Main Components

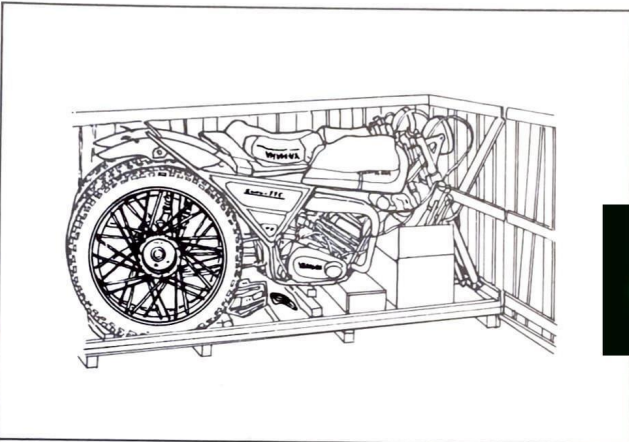
A. Front Fender

The front fender is held to the rear wheel by means of rubber bands. Remove the front fender.



B. Front Wheel

The front wheel is tied to the right side of the rear cushion by means of a rope. Remove the front wheel.



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C. Card Board Packages

Remove all card board packages, rider's seat and other parts which can easily be removed.

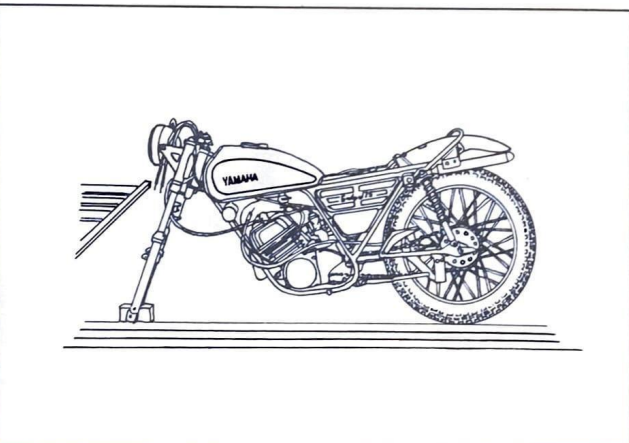
D. Chassis

Take the chassis out of the crate. This operation may require two persons. The side stand is unuseable at this stage, and therefore, the front wheel should be installed first.

* On the DT125A, assembly should be started with the front wheel.

E. Sub-carrier

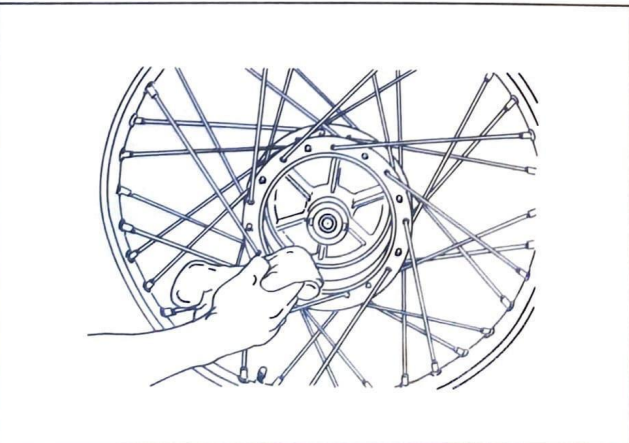
The sub-carrier is held by a steel band. Remove it using a steel bar.

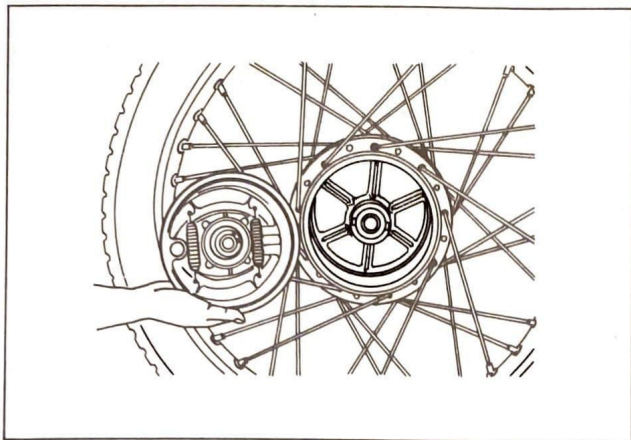


5. Assembly

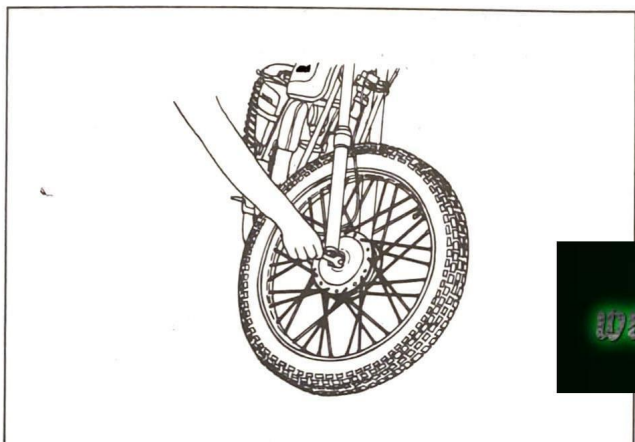
A. Front wheel

1. Clean the inner surfaces of the front wheel drum with a clean cloth to remove dust and oil.
2. Grease the meter gears.
 - * Take care not to attach the grease to the drum inner surface. Don't grease too much.

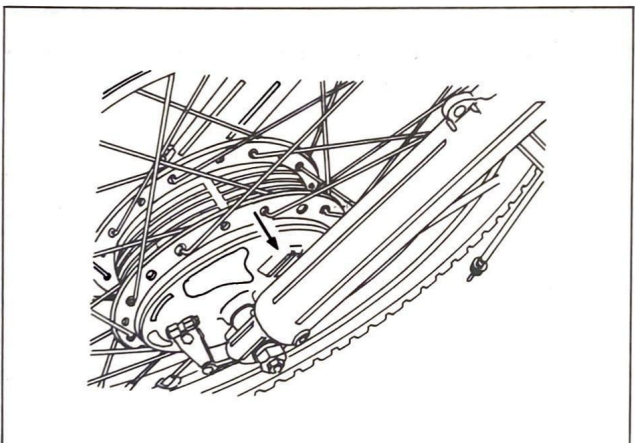




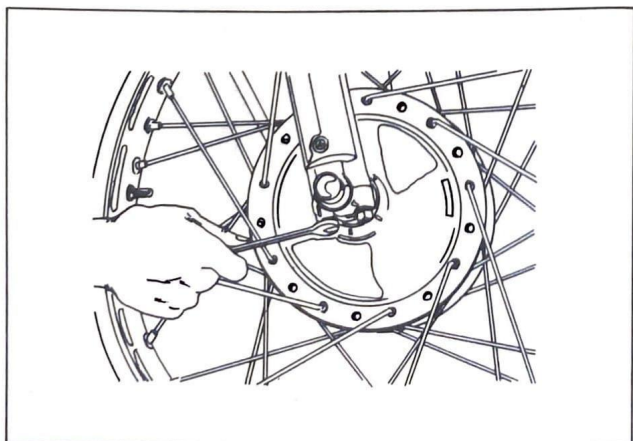
3. Install the shoe plates in the drum.
* Be careful not to drop the hub dust cover.



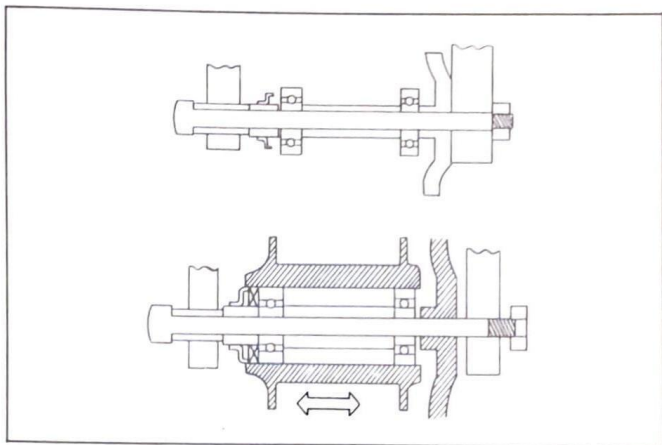
4. Remove the shaft nut. Thoroughly loosen the two 8-mm nuts holding the axle holder, and pull out the axle.
* On the DT100A, only one 8-mm bolt should be loosened.



5. Install the front wheel between the front forks while taking care so that the fork stopper correctly fits in the shoe plate torque stopper hole.



6. Temporarily tighten the two 8-mm nuts to secure the axle holder. The nuts should be tightened so that the axle will not turn together with the axle nut when the nut is tightened. Otherwise, it will be impossible to secure the axle by screwing in the nut. And if the nut becomes loose, the wheel will wobble. (see next page)

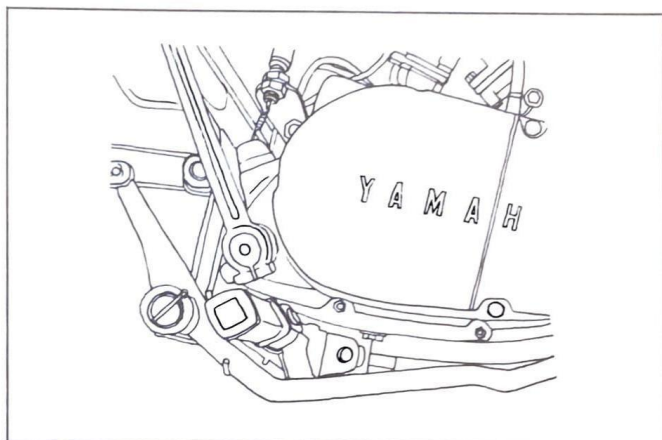


When the axle is pulled enough to the side, screw in the 8-mm nuts (securing the axle holder) until tight. Insert the cotter pin, and bend its ends.

Tightening torque:

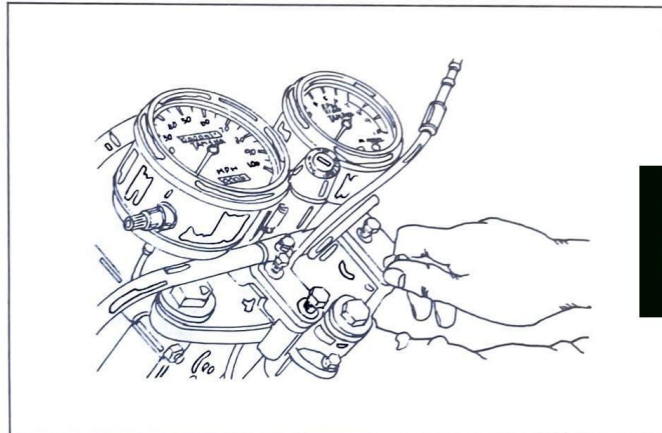
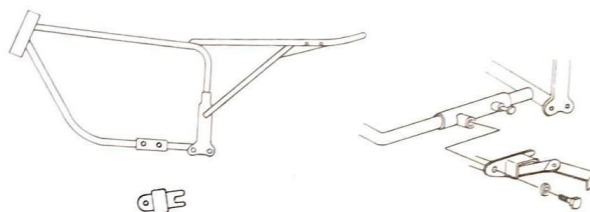
8mm nut 14.5 ft-lbs (2.0 m-kp)

Axle nut 21.7~25.3 ft-lbs (3.0~3.5 m-kp)



B. Foot Rests (DT125)

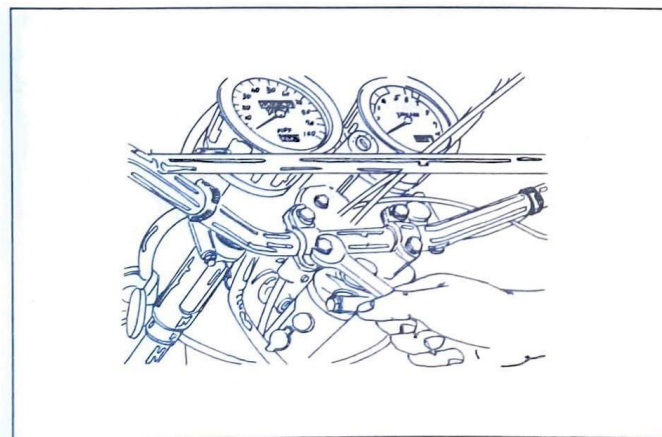
1. Hold the motorcycle upright, and secure the foot rest bracket to the frame bracket using the 10-mm bolt.



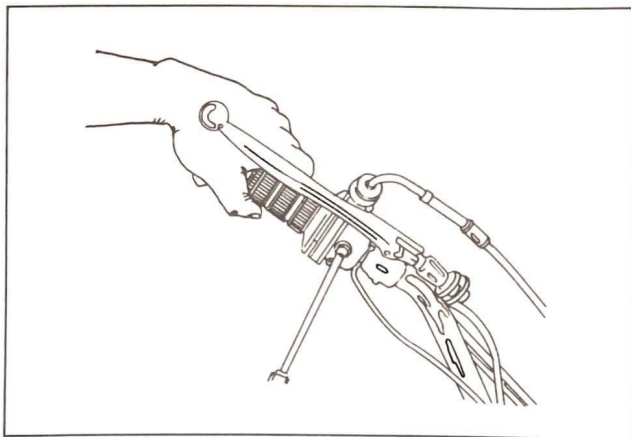
C. Handlebars

1. Remove the 8-mm bolt securing the handle upper holder.

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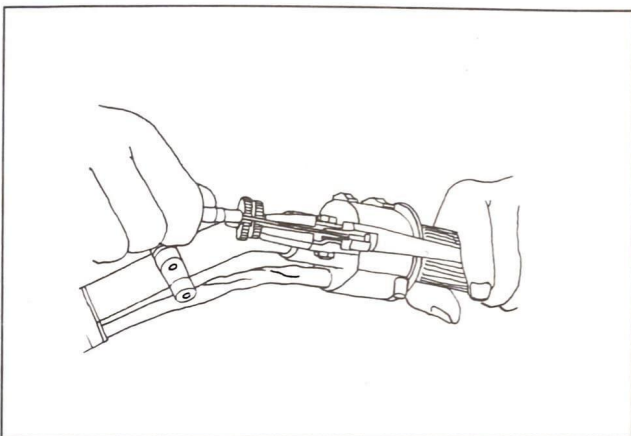


2. Install the handlebars using the bolt.

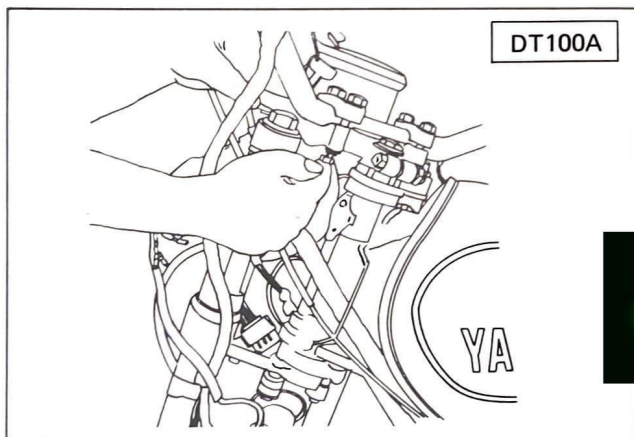


3. Sparingly grease the right handlebar end (where the accelerator grip is installed), and install the accelerator grip.

* Care should be taken so that the kill switch wire is not pinched between the accelerator grip and the handlebar.



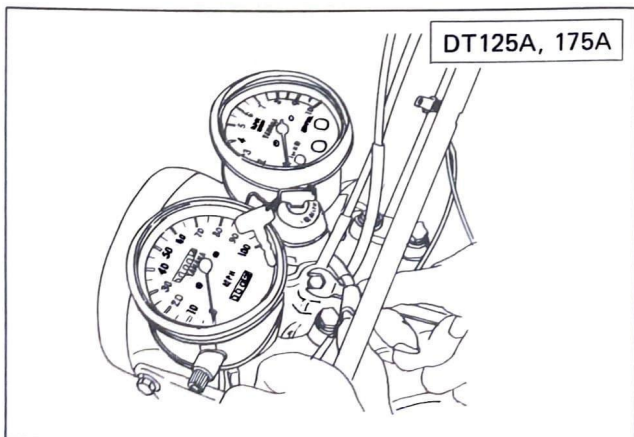
4. Connect the clutch wire to the clutch lever.
 - a. Insert the wire end into the hole in the clutch lever.
 - b. Align the wire adjusting bolt hole and the adjusting nut hole with the lever holder hole.
 - c. Hook the outer cable onto the wire adjusting bolt, and pull out the inner cable by squeezing the clutch lever.
 - d. While releasing the clutch lever gently, hold the outer cable and pull it toward the opposite side of the clutch lever.
 - e. When the outer cable end is aligned with the wire adjusting bolt end, insert the outer cable into the adjusting bolt hole.

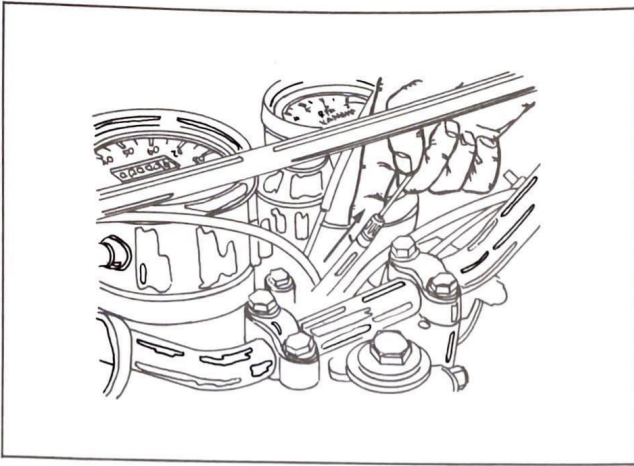


- D. Install the meter bracket on the handle crown.

On the DT125A and 175A, the bracket should be placed over the handle crown, but on the DT100A, it should be placed under.

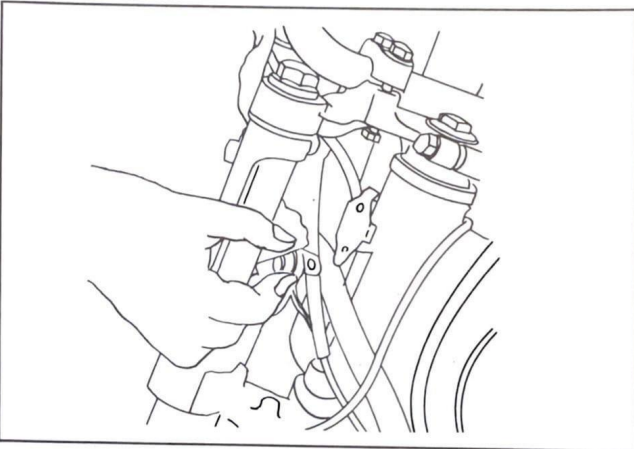
Secure it with the 6-mm bolt.



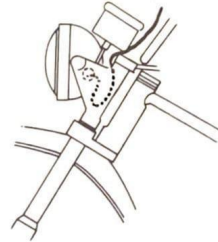


Notes:

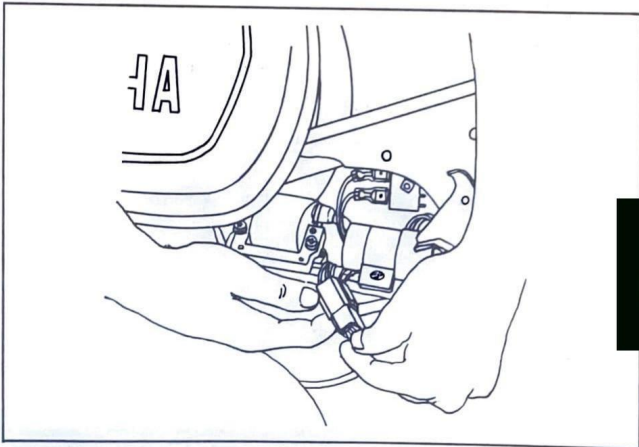
- 1) Take care not to pinch wires.
- 2) Pass the clutch wire, brake wire and throttle wire through the space between the handle crown and the meter bracket.



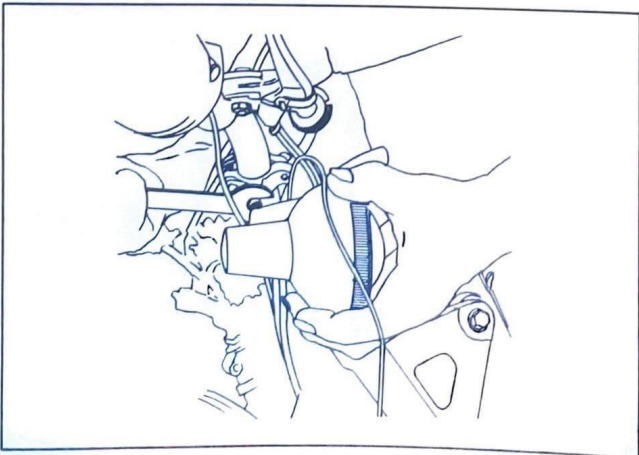
- 3) Connect all wires, wire harnesses and wire connectors in the light body. Make sure all wires are tight.
- * On the DT100A, the handle switch wire should be bent, and the connector should be positioned inside the lamp stay.



- E. Connect the main switch coupler to the wire harness located under the fuel tank.

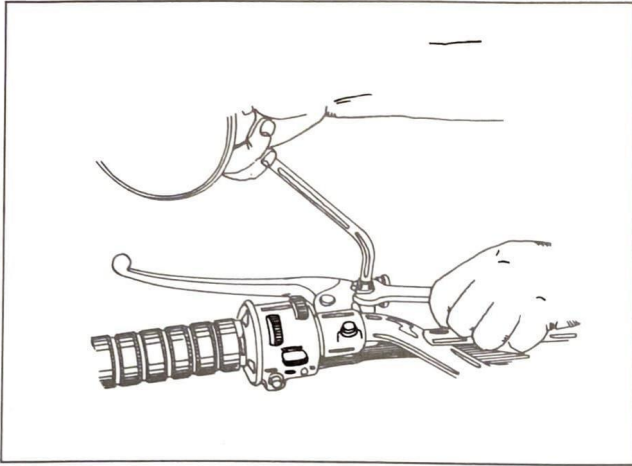


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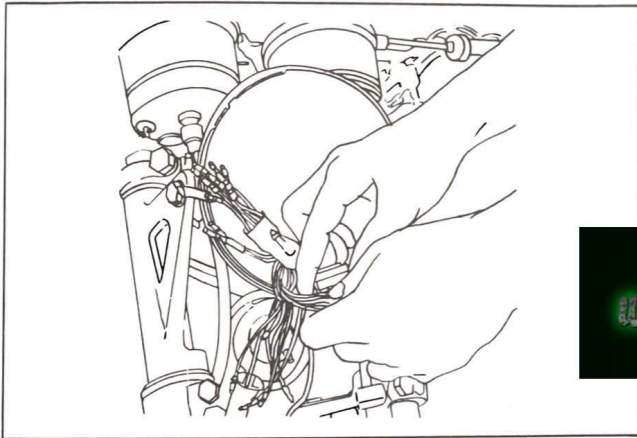
F. Front flasher light

1. Screw the 8-mm bolt (for the flasher light) into the flasher stay attached to the handle bar. Position the flasher correctly, and lock it with the nut.
2. Thread the lead wire through the front stop switch lead wire clamp band. (Perform the same for both right and left sides.)

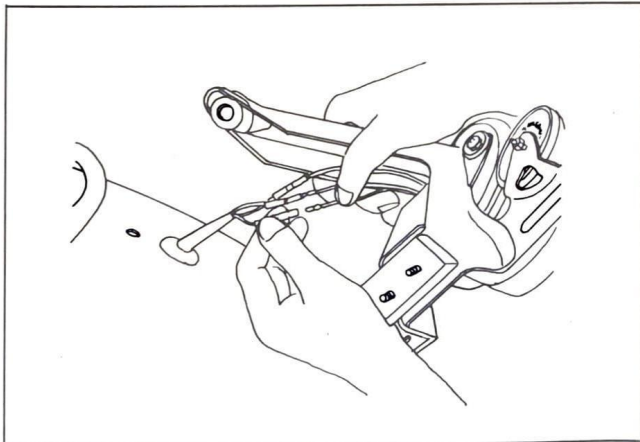


G. Back mirror

Screw the back mirror stem into the 8-mm hole in the lever holder, and secure with the lock nut. The mirror should be so angled that the rider can ensure a proper rear view.

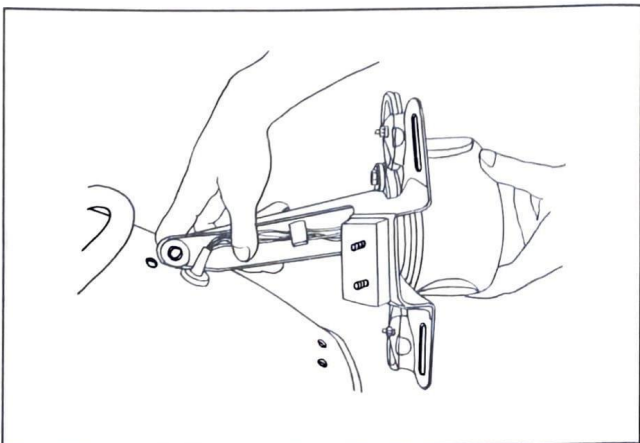


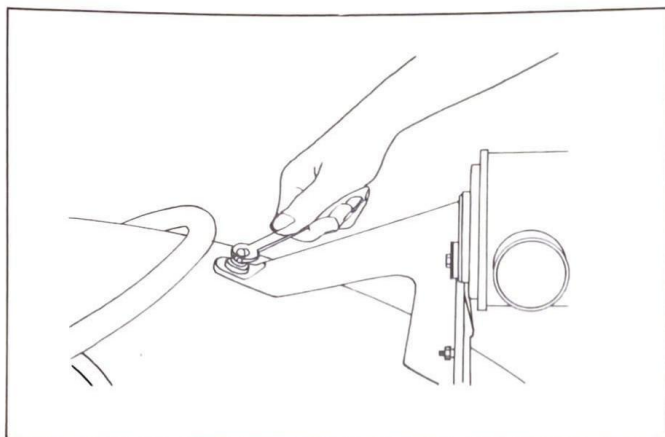
H. Remove the headlight rim and connect the wires.



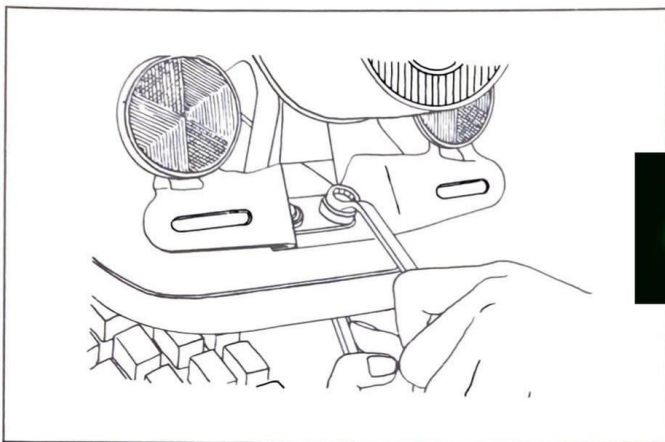
I. Tail lamp

- a. Remove the taillamp assembly holding bolt from the taillamp license bracket.
- b. Connect the lead wires of the taillamp ass'y and secure them with the hook. (The lead wires of the same color must be connected to each other.)

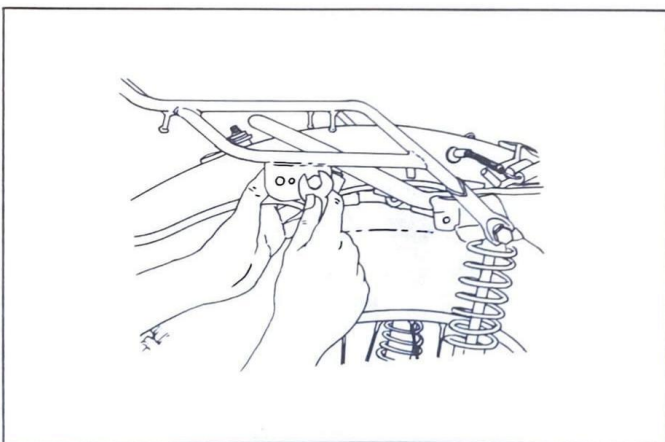




Secure the front part of the license bracket using the bolt washer with cover, fender mounting collar.



Secure the rear part of the license bracket using two shoulder bolts, plain washers.



J. Sub-carrier

The sub-carrier should be installed by means of the rear cushion upper bracket bolt (10-mm) and the rear fender fitting bolt (8-mm).

The bolt that you find attached to the motorcycle when unpacked is "dummy," so it should not be used.

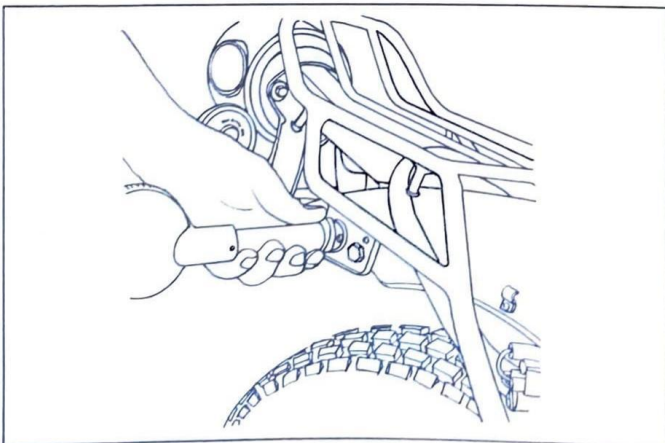
To install the sub-carrier, use the 55-mm-long bolt contained in the vinyl bag.

Note:

Make sure the sub-carrier stay is positioned outside the rear cushion washer.

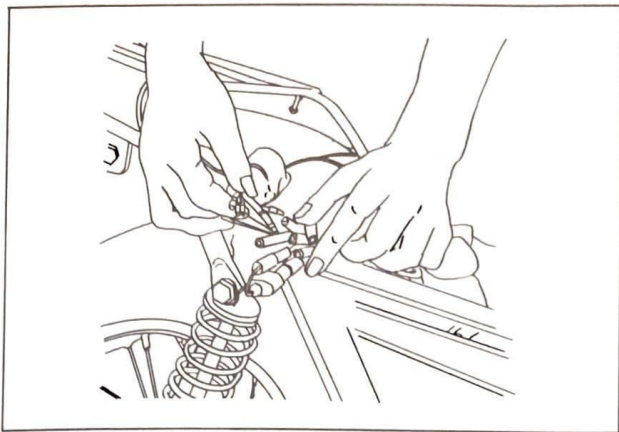
Rear cushion bolt tightening torque:
3.5–4.0 m·kg. 20–29 ft·lbs.

*This procedure is not required for the DT100.

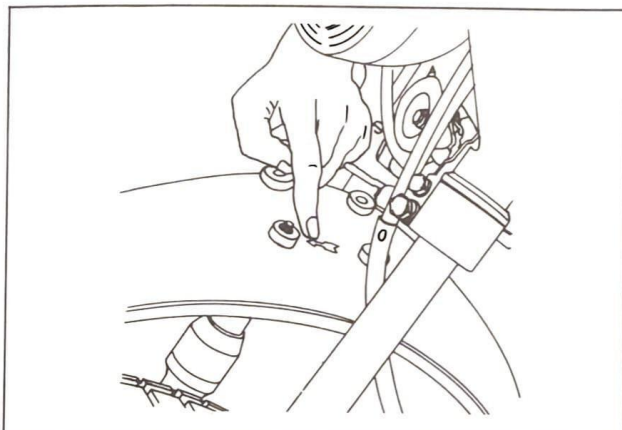


K. Rear flasher light

1. The rear flasher light should be installed as illustrated. Both flasher light body and flasher collar can correctly be positioned by the locating pin.



- 2 Thread the flasher light lead wire through clamps, and connect it to the wire harness. Then pass the wire through the connector cover, together with the taillight lead wire mentioned in 1.

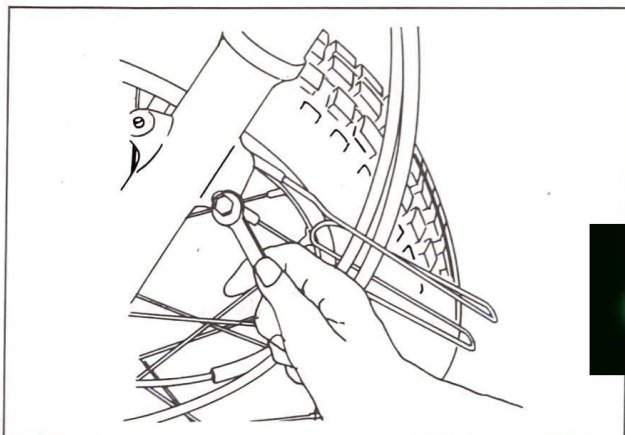


L. Front fender

Remove the four bolts attached to the under-bracket. (The bolts are held together with the damper.) The front fender should be installed as illustrated.

Notes:

An arrow mark is embossed in the top center of the fender. The arrow mark should face toward the front.

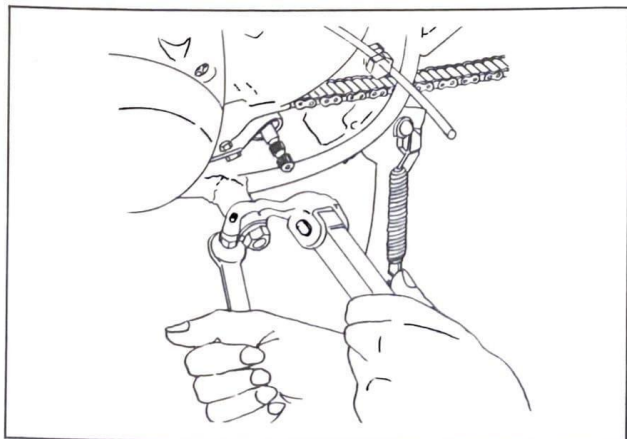


M. Wire holder

Using the 6-mm bolt, install the wire holder. Be sure to align the locating holes with each other.

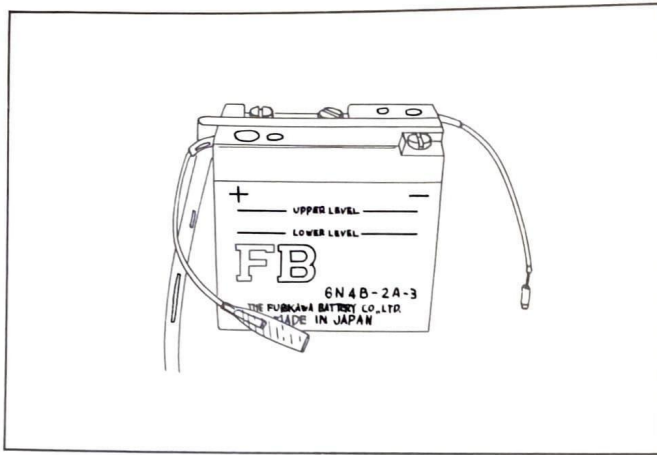
* This procedure does not apply to the DT100A.

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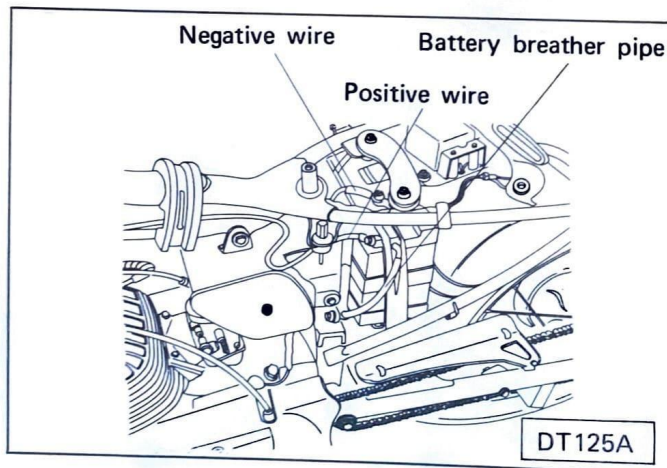
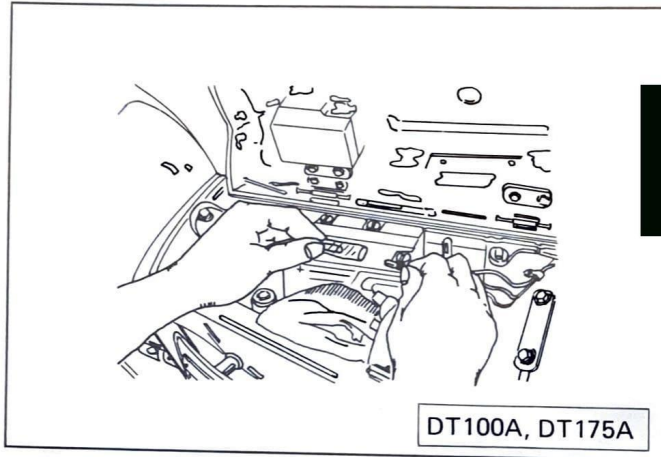
N. Foot rests and change arm

1. Installation should be done as illustrated.
2. The change arm should be so installed that when the foot rest cover is placed, the change arm end is 3 to 4 cm higher than the top of the cover.
3. To facilitate the foot rest cover installation, it is advisable to apply water sparingly to the fitting hole, and drive in the foot rest cover with a hammer.
4. On the DT125A foot rest, follow the procedure in B above.

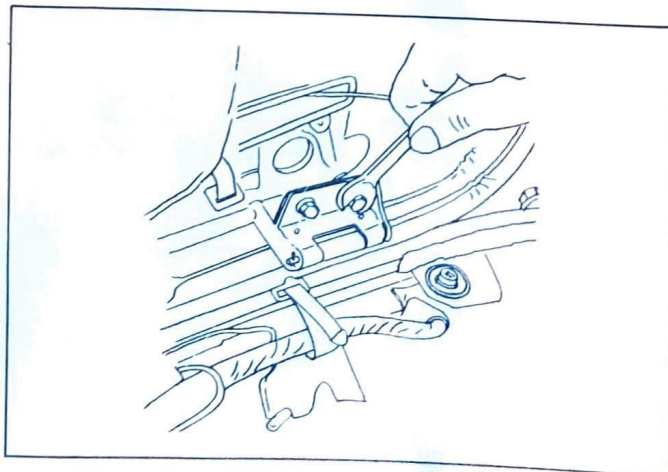


O. Battery (DT100A and 175A)

1. Remove the air cleaner dust cover. (6-mm pan head screws and hexagon head bolt)
2. Secure the breather pipe by means of the "Caution" sticker attached to the top of the rear fender. Keep the breather pipe straight as much as possible. Take care not to bend, flatten or kink the breather pipe.
3. Mount the battery, and wire the battery. First, connect the positive wire.



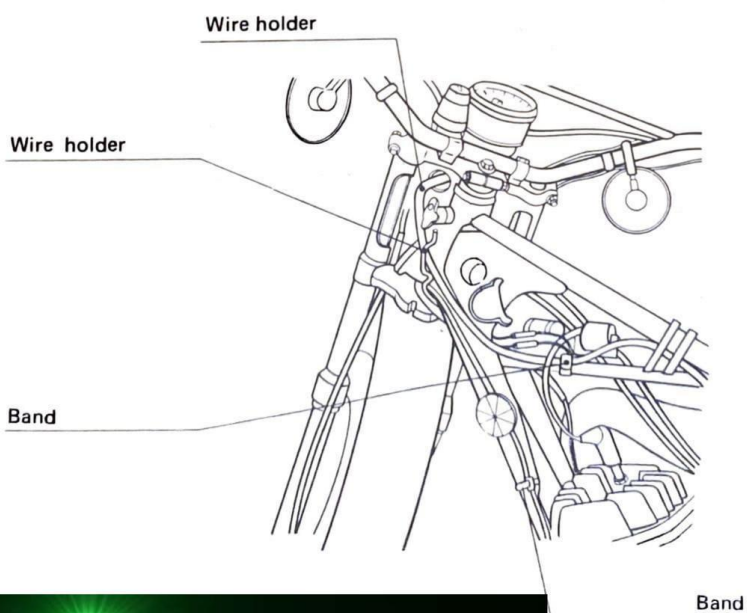
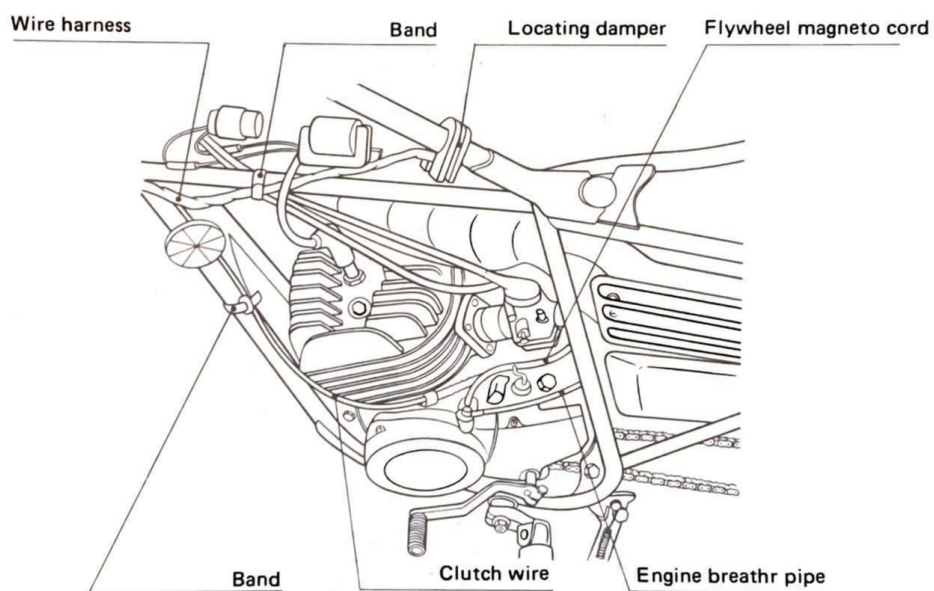
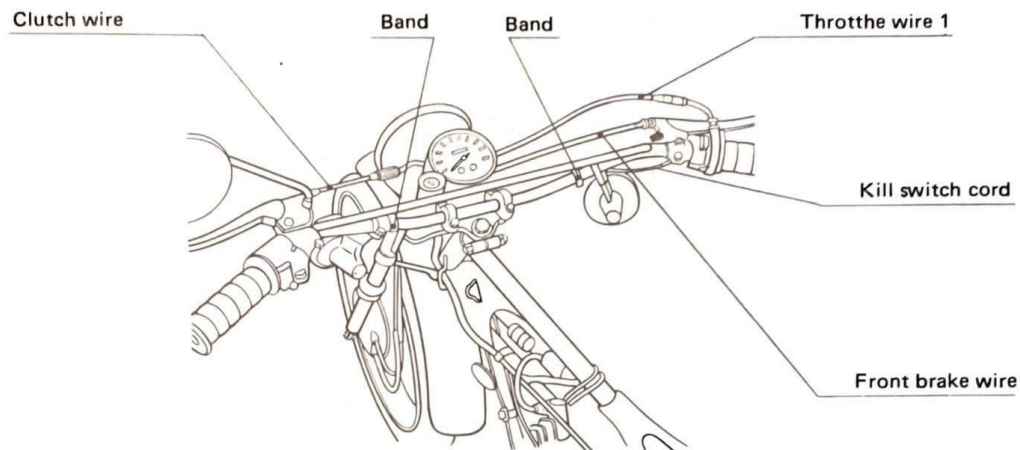
4. On the DT125A, the battery is already mounted on the motorcycle. Therefore, remove the battery, and charge it. Then replace the battery, and wire it as illustrated.
 - a. The positive wire is attached to the battery. This wire is for the starter motor and should be connected to the starter relay.
 - b. The negative wire should be connected to the frame.
 - c. The breather pipe should be secured by the "Caution" sticker.

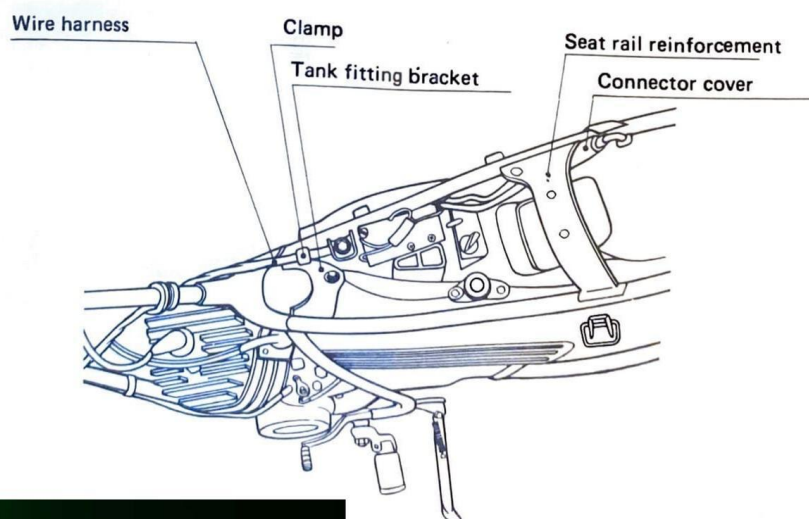
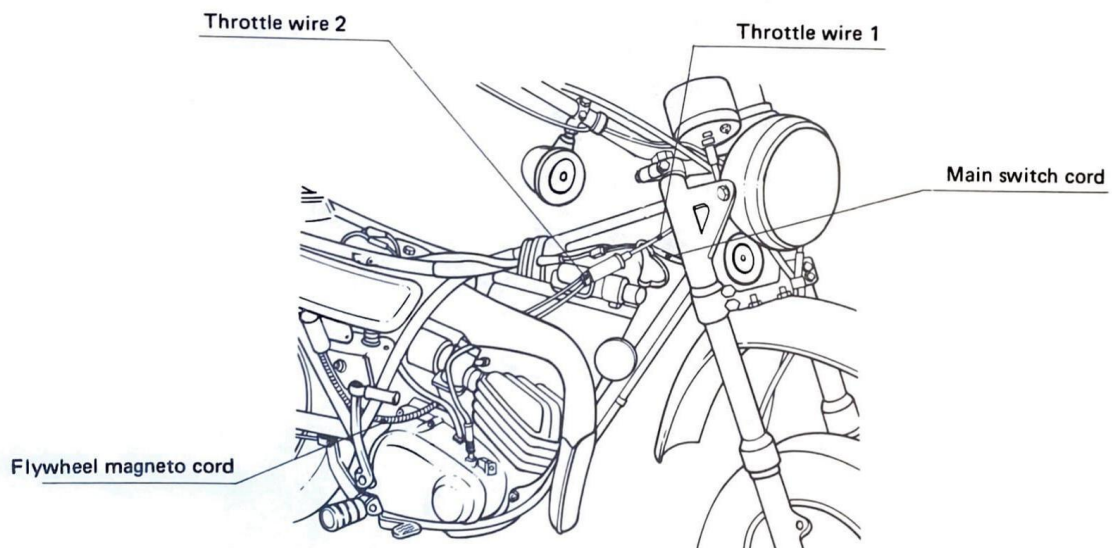
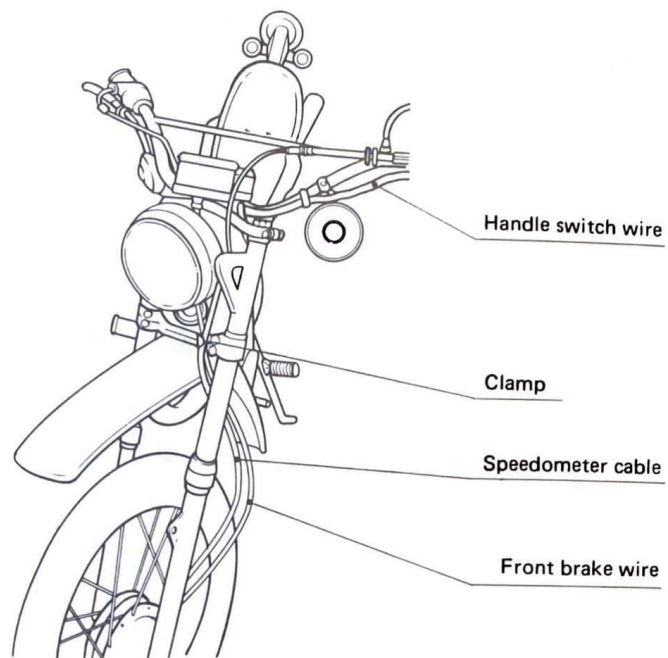


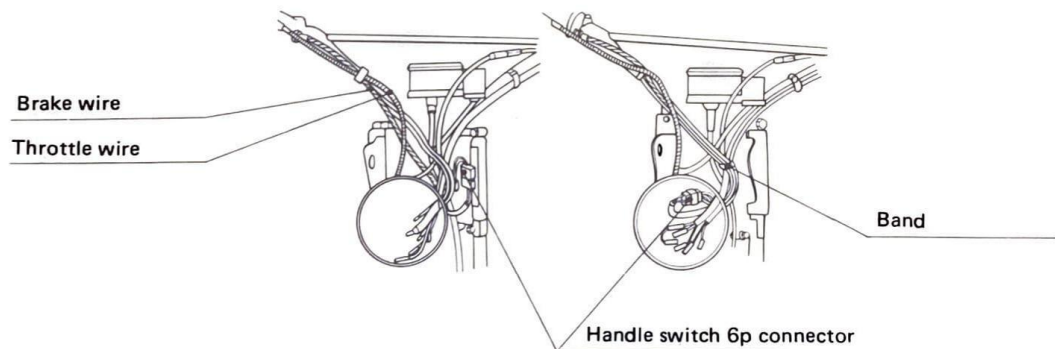
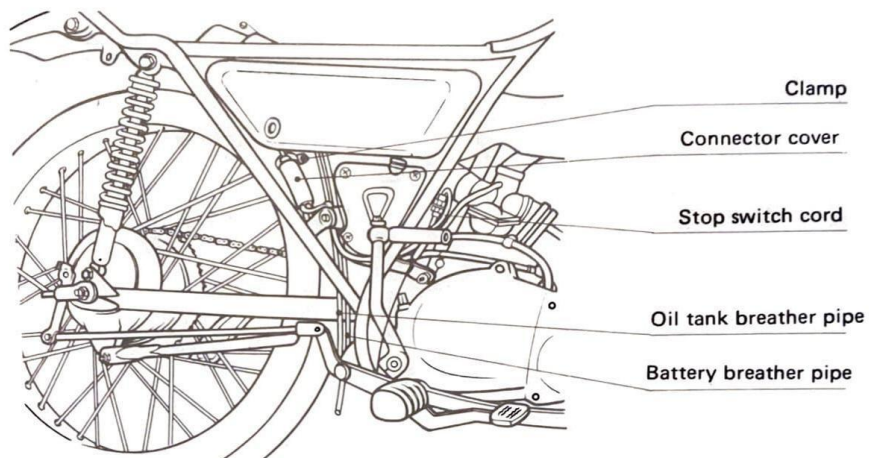
P. Rider's seat

As illustrated, the rider's seat should be installed using the seat pin and stopper. The seat pin should be inserted frontward. If inserted the other way round, the stopper will not be effective.

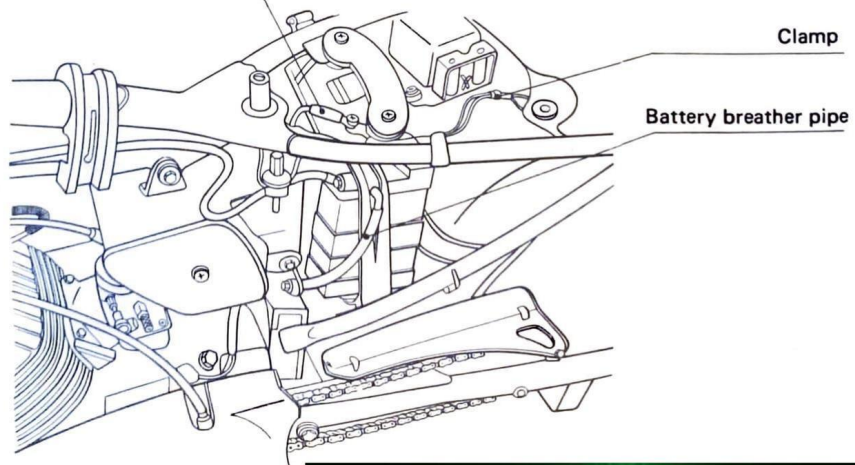
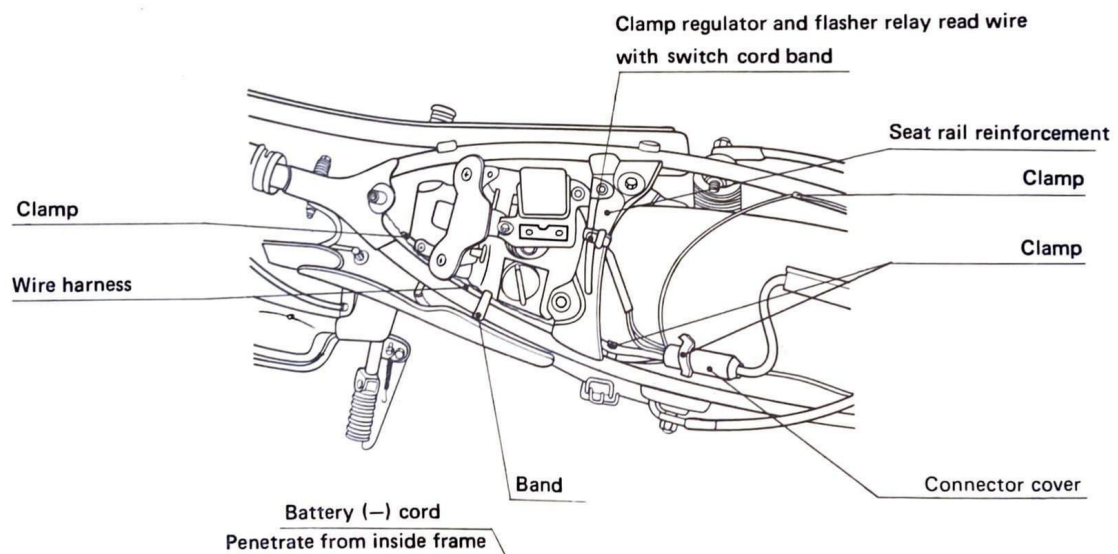
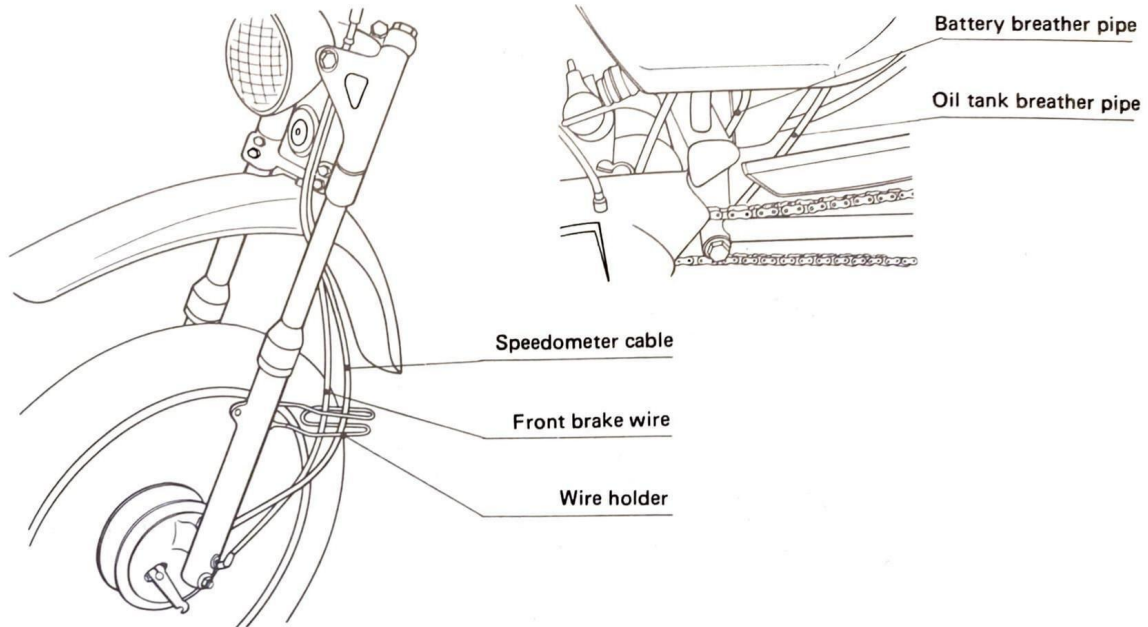
DT100A CABLE ROUTING DIAGRAM

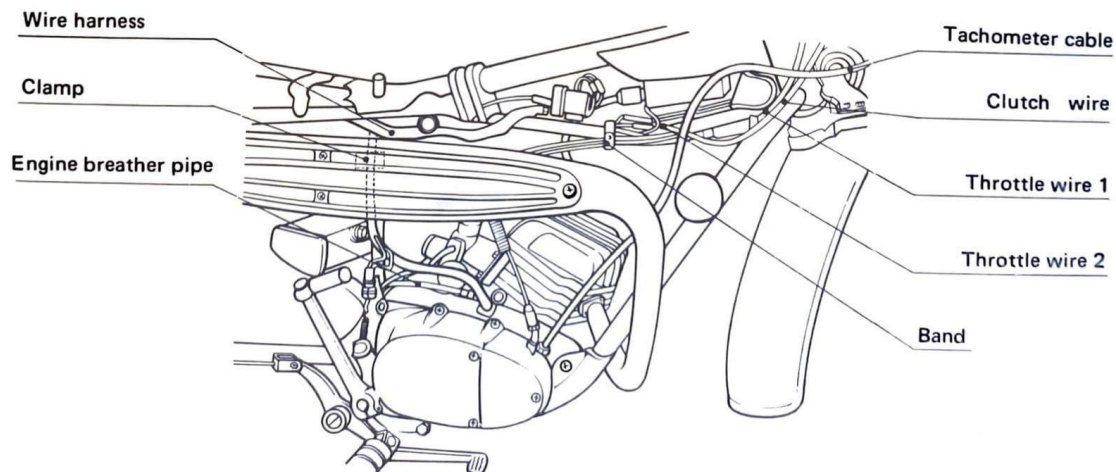
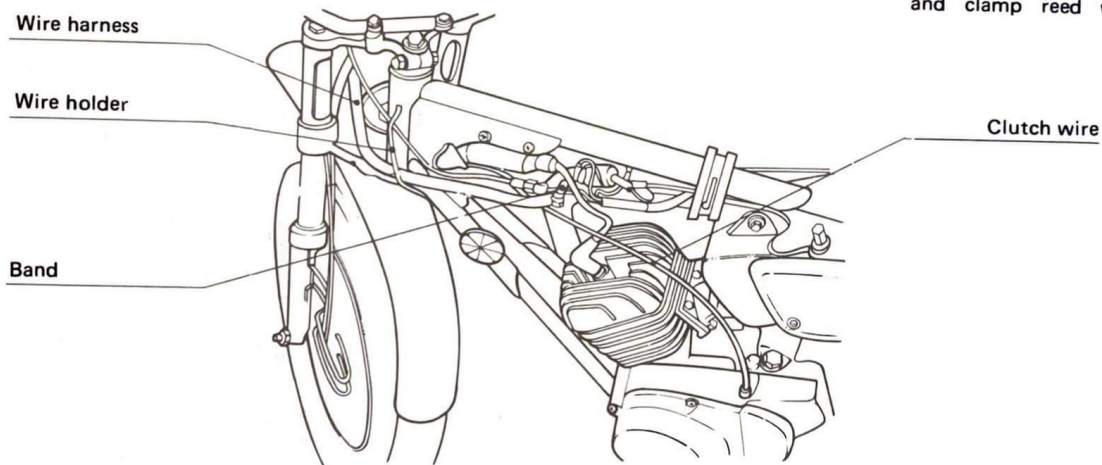
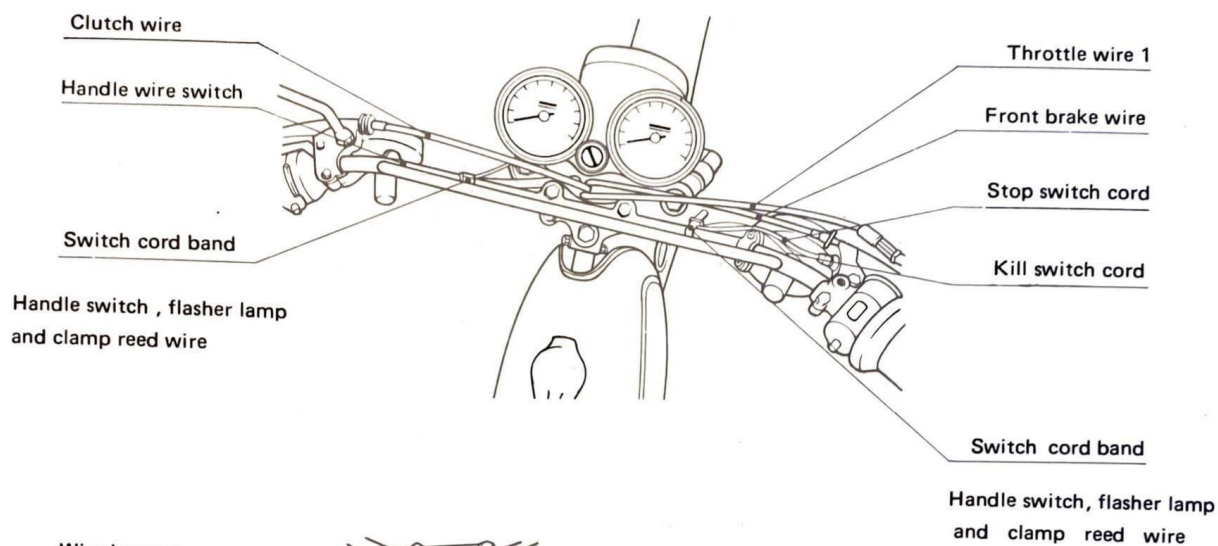




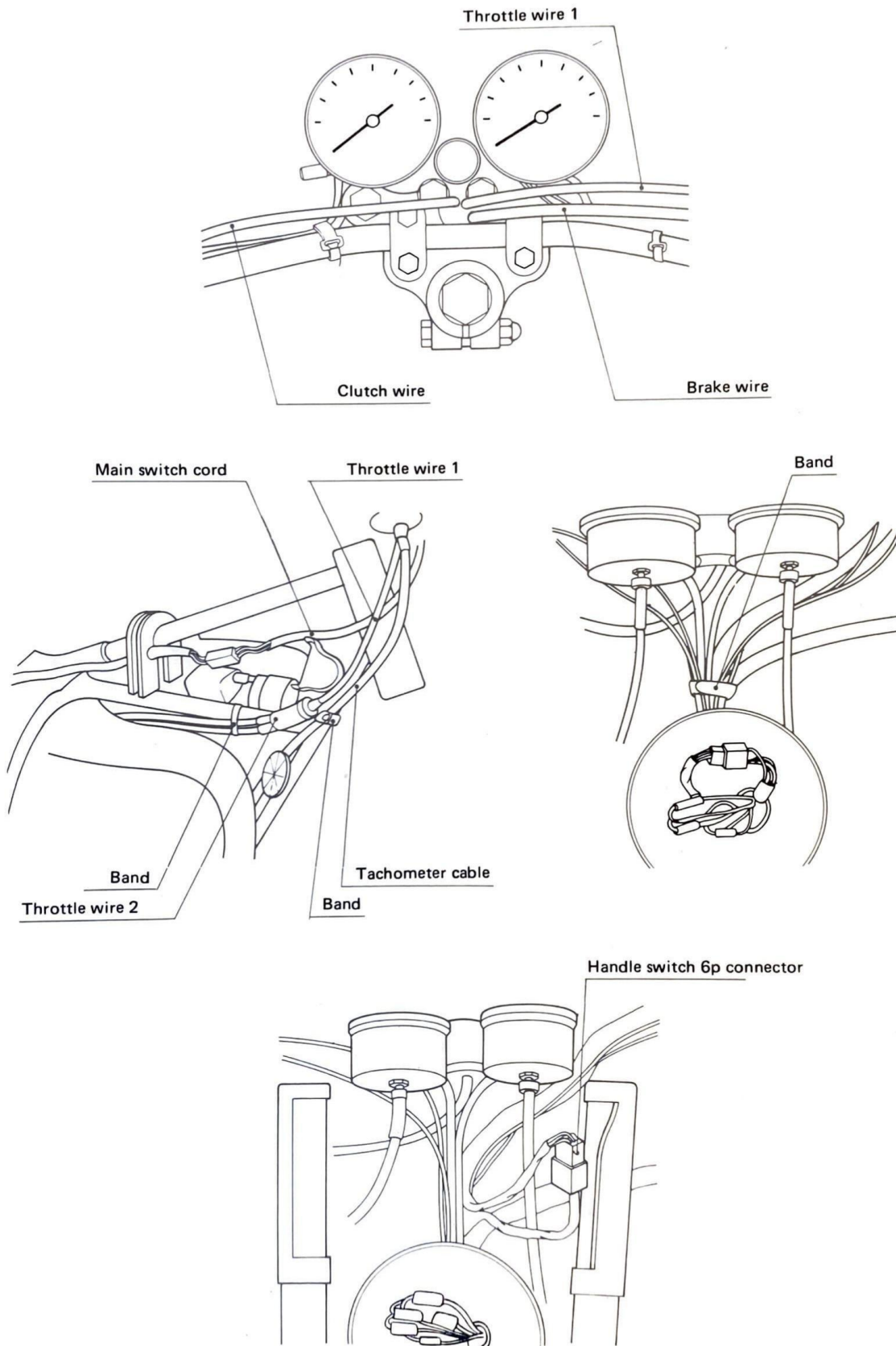


DT125A CABLE ROUTING DIAGRAM





DT175A CABLE ROUTING DIAGRAM



Note: For other details, refer to the DT100A cable routing diagram.

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