



SUPPLEMENTARY SERVICE MANUAL










2008

PHAZER

Venture

**PZ50X
PZ50GTX
PZ50RTX
PZ50MTX
PZ50VTX
PZ50MPX**

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PERIODIC INSPECTION AND ADJUSTMENT

TUNING FRONT SUSPENSION

Spring preload

1. Adjust:
 - Spring preload

Adjustment steps:

- Loosen the locknut ①.
- Turn the spring seat ② in or out.

PZ50GT

Spring seat distance	Standard		
	Shorter ←		→ Longer
Preload	Harder ← → Softer		
Length ①	Min.		Max.
	172 mm (6.77 in)	182 mm (7.17 in)	182 mm (7.17 in)

PZ50MT “Europe”

Spring seat distance	Standard		
	Shorter ←		→ Longer
Preload	Harder ← → Softer		
Length ①	Min.		Max.
	215 mm (8.46 in)	225 mm (8.86 in)	226 mm (8.90 in)

PZ50VT “Europe”/PZ50MP

Spring seat distance	Standard		
	Shorter ←		→ Longer
Preload	Harder ← → Softer		
Length ①	Min.		Max.
	205 mm (8.07 in)	215 mm (8.46 in)	216 mm (8.50 in)

- Turn the adjusting ring ③ to the proper position.

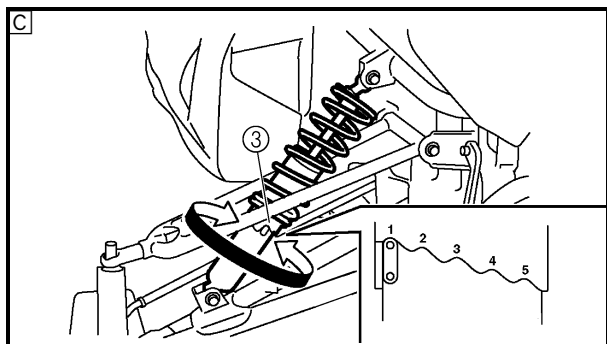
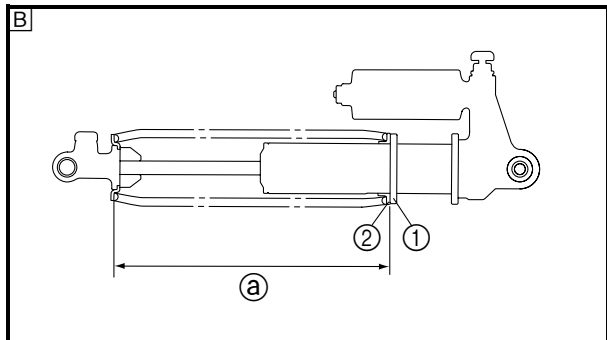
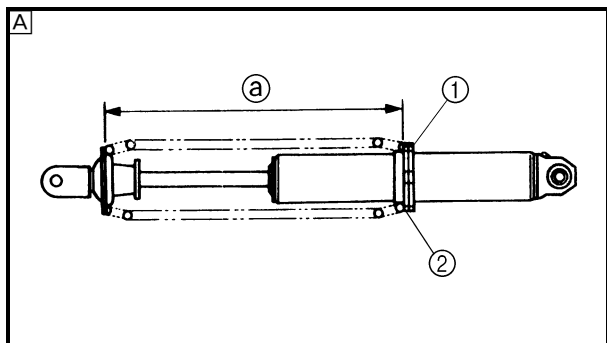
PZ50/PZ50MT “USA/Canada”/PZ50VT “USA/Canada”

Spring adjuster position	1	2	3	4	5
Preload	Softer ←			→ Harder	
Standard	1				

Ⓐ PZ50MT “Europe”/PZ50VT “Europe”/PZ50MP

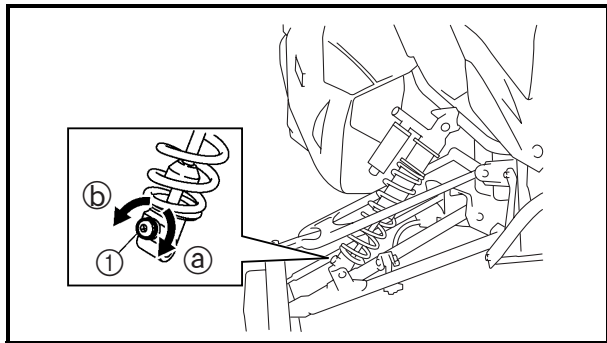
Ⓑ PZ50GT

Ⓒ PZ50/PZ50MT “USA/Canada”/PZ50VT “USA/Canada”

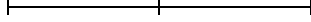


CAUTION: _____
Be sure that the left and right spring preload are the same.

⚠ WARNING _____
These shock absorber contain highly pressurized nitrogen gas.
Do not tamper with or attempt to open the shock absorber assemblies.
Do not subject the shock absorber assemblies to flames or high heat, which could cause it to explode.



Rebound damping force adjustment (PZ50GT)
The rebound damping force can be adjusted by turning the adjuster ①.

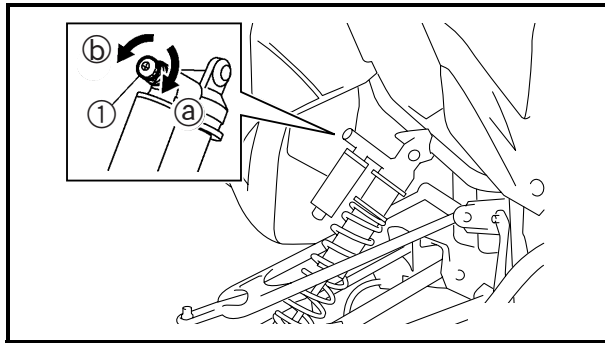
	20 clicks out 12 clicks out 3 clicks out
Adjuster position	 Minimum Standard Maximum Turns out (b)* ← → Turns in (a)
Rebound damping force	Soft ← → Hard

* With the adjuster fully turned lightly in direction (a)

CAUTION: _____

- Do not continue to turn the adjuster in direction (a) after it stops. The shock absorber can be damaged and rebound damping force adjustments cannot be made.
- Do not turn the adjuster in direction (b) more than 20 clicks. Even if the adjuster is continually turned after 20 clicks, there will be no change in the rebound damping force.
- Be sure to stop the adjuster at a position where there is a click.

FRONT SUSPENSION/ AIR PRESSURE ADJUSTMENT (PZ50RT)



Compression damping force adjustment (PZ50GT)

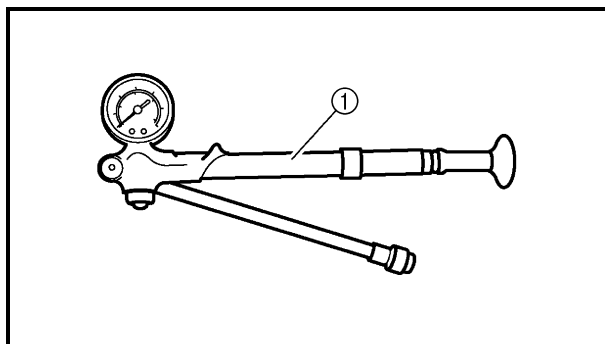
The compression damping force can be adjusted by turning the adjuster ①.

Adjuster position	12 clicks out	7 clicks out	2 clicks out
	Minimum	Standard	Maximum
	Turns out (b)* ← → Turns in (a)		
Compression damping force	Soft ← → Hard		

* With the adjuster fully turned lightly in direction (a)

CAUTION:

- Do not continue to turn the adjuster in direction (a) after it stops. The shock absorber can be damaged and compression damping force adjustments cannot be made.
- Do not turn the adjuster in direction (b) more than 12 clicks. Even if the adjuster is continually turned after 12 clicks, there will be no change in the compression damping force.
- Be sure to stop the adjuster at a position where there is a click.



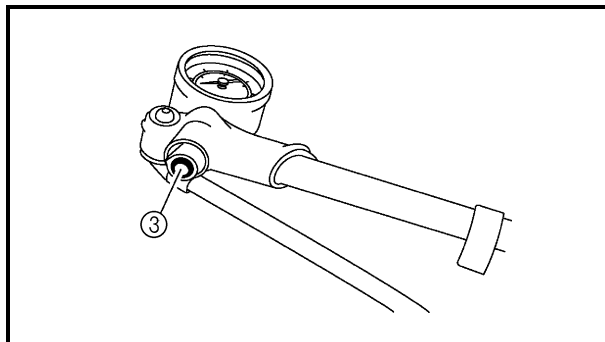
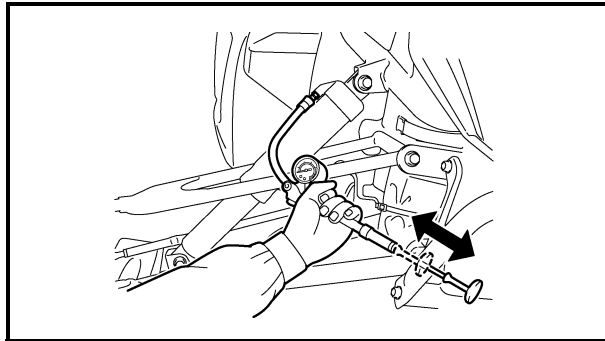
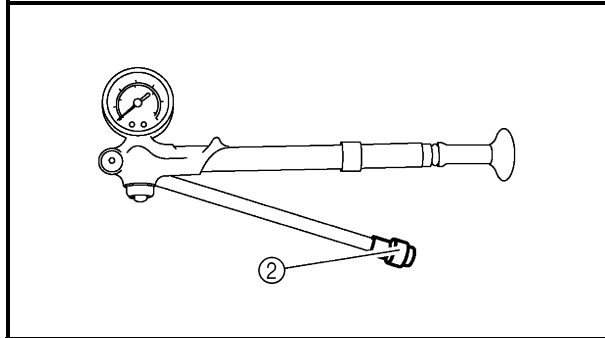
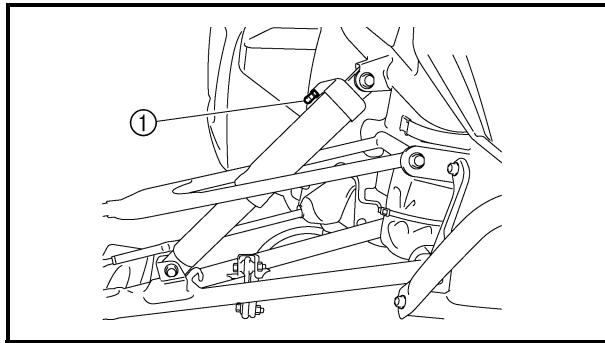
AIR PRESSURE ADJUSTMENT (PZ50RT)

CAUTION:

The left and right shock absorber air pressure must be set to the same setting. Uneven settings can cause poor handling and loss of stability.

This snowmobile is equipped with FOX shock absorbers as standard equipment.

The air pressure of the shock absorbers can be adjusted using the shock absorber pump ① included with your snowmobile.



Adjustment steps:

⚠ WARNING

Support the snowmobile securely on a suitable stand before adjusting the shock absorbers.

CAUTION:

Make sure that there is no load on the shock absorbers and that they are fully extended before making any air pressure adjustments.

1. Place the snowmobile on a level surface and apply the parking brake.
2. Lift the front of the snowmobile onto a suitable stand to raise the skis off the ground.
3. Remove the air valve cap ① from the shock absorber.
4. Install the hose connector ② of the shock absorber pump onto the air valve of the shock absorber and tighten it approximately six turns until the pressure registers on the pump gauge.

CAUTION:

Do not overtighten the connector onto the air valve as this will damage the connector seal.

NOTE:

If the shock absorber has no air pressure, the gauge reading will be zero.

5. To increase the air pressure, operate the pump a few times. The pressure should increase slowly. If the pressure increases rapidly, check to make sure that the pump is properly connected and tightened onto the air valve. To decrease the air pressure, push the black bleed valve button ③.

NOTE:

To allow pressure to escape from the pump and the shock absorber, push the button halfway down and hold it. To allow only a small amount of pressure to escape, push the button all the way down and quickly release it.

6. Remove the hose connector from the air valve.

NOTE: _____

When removing the connector, the sound of air escaping may be heard, but this is from the pump hose, not the shock absorber.

Air pressure range:

**345 kPa (3.4 kgf/cm², 50 psi) to 1,034 kPa
(10.3 kgf/cm², 150 psi)**

**Recommended air pressure:
483 kPa (4.8 kgf/cm², 70 psi)**

CAUTION: _____

Do not exceed 1,034 kPa (10.3 kgf/cm², 150 psi).

7. Install the air valve cap.

NOTE: _____

If the front suspension bottoms too easily or rolls too much during cornering, increase the air pressure by 34 kPa (0.3 kgf/cm², 5 psi). If the suspension is too firm and you want a more compliant ride, decrease the air pressure by 34 kPa (0.3 kgf/cm², 5 psi).

REAR SUSPENSION

Stopper band

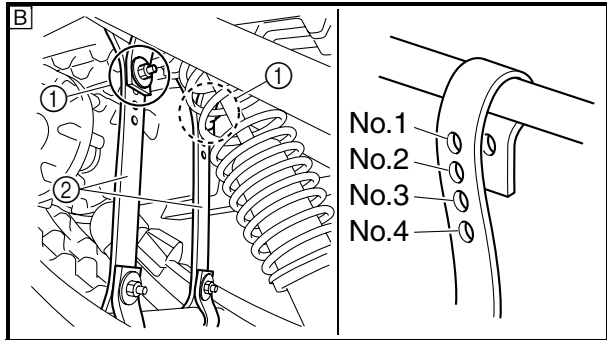
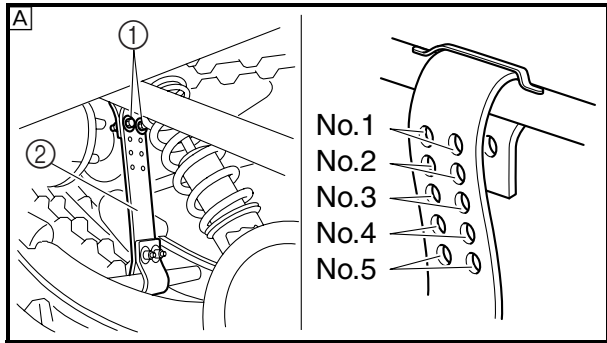
1. Adjust:
 - Stopper band length

CAUTION: _____

Make sure the left and right rear suspension stopper bands are adjusted evenly. (PZ50VT, PZ50MP)

NOTE: _____

This adjustment affects the handling characteristics of the machine.




Adjustment steps:

- Remove the stopper band bolts ①, nuts and washers.
- Adjust the length of the stopper bands ② by inserting the bolts in different holes.

Standard setting:

- No. 1 hole (PZ50/PZ50VT “Europe”/PZ50MP)
- No. 2 holes (PZ50GT/PZ50RT)
- No. 3 holes (PZ50MT)
- No. 4 hole (PZ50VT “USA/Canada”)

- Tighten the stopper band nuts.

	Stopper band nut: 4 Nm (0.4 m · kg, 2.9 ft · lb)
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- A PZ50/PZ50GT/PZ50RT/PZ50MT
- B PZ50VT/PZ50MP

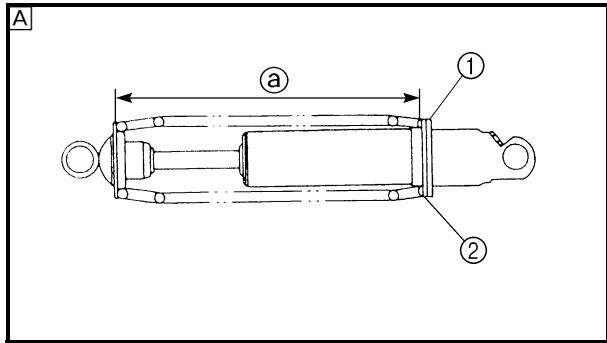
Choosing other settings:

CAUTION: _____

The standard settings work well under most general riding conditions. The suspension can be adjusted to work better in one condition, but only at the expense of another. Keep this in mind when you adjust the suspension.

<input type="checkbox"/> A: No. 5 hole <input type="checkbox"/> B: No. 4 hole (shortest)	No. 1 hole (longest)
More weight on skis: <ul style="list-style-type: none"> • Heavy steering/oversteer • More maneuverability Favors: hardpack snow, ice, smooth trails, tight turns	Less weight on skis: <ul style="list-style-type: none"> • Light steering/understeer • Better acceleration and speed Favors: deep snow, straight line acceleration, top speed

- A PZ50/PZ50GT/PZ50RT/PZ50MT
- B PZ50VT/PZ50MP



Spring preload

1. Adjust:
- Spring preload

Adjustment step:

Front side

- Loosen the locknut ①.
- Turn the spring seat ② in or out.

**PZ50GT “Europe”/PZ50RT “USA/Canada”/
PZ50MT “Europe”**

Spring seat distance	Standard		
	Shorter ←		→ Longer
Preload	Harder ← → Softer		
Length ②	Min.		Max.
	180 mm	190 mm	191 mm
	(7.09 in)	(7.48 in)	(7.52 in)

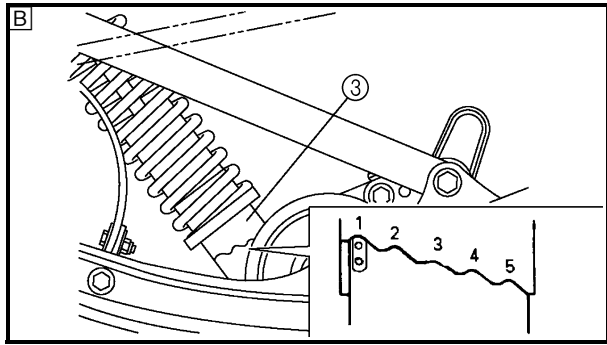
PZ50RT “Europe”

Spring seat distance	Standard		
	Shorter ←		→ Longer
Preload	Harder ← → Softer		
Length ②	Min.		Max.
	178 mm	188 mm	189 mm
	(7.01 in)	(7.40 in)	(7.44 in)

PZ50VT “Europe”/PZ50MP

Spring seat distance	Standard		
	Shorter ←		→ Longer
Preload	Harder ← → Softer		
Length ②	Min.		Max.
	194 mm	204 mm	205 mm
	(7.64 in)	(8.03 in)	(8.07 in)

Ⓐ PZ50GT “Europe”/PZ50RT/PZ50MT “Europe”/
PZ50VT “Europe”/PZ50MP



- Turn the adjusting ring ③ to the proper position.

PZ50/PZ50GT “USA/Canada”/PZ50MT “USA/Canada”/PZ50VT “USA/Canada”

Spring adjuster position	1	2	3	4	5
Preload	Softer ←			→ Harder	
Standard	1				

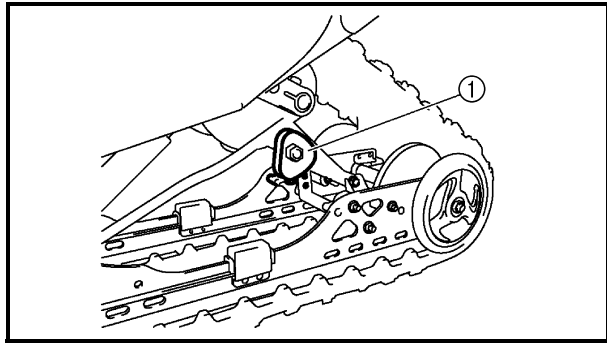
⚠ WARNING

This shock absorber contains highly pressurized nitrogen gas.

Do not tamper with or attempt to open the shock absorber assembly.

Do not subject the shock absorber assembly to flames or high heat, which could cause it to explode.

ⓑ PZ50/PZ50GT “USA/Canada”/PZ50MT “USA/Canada”/PZ50VT “USA/Canada”



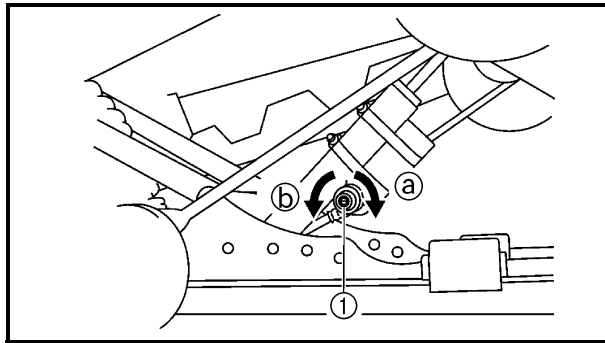
Rear side

- Turn the adjuster ① to proper position.

Spring adjuster position	S	M	H
Spring rate	Soft	Medium	Hard
Standard	M		

⚠ WARNING

Always adjust both spring preload (left and right) to the same setting. Uneven adjustment can cause poor handling and loss of stability.



Rear suspension damping force adjustment

The damping force can be adjusted by turning the adjuster ①.

PZ50RT

	20 clicks out	11 clicks out	1 click out
Adjuster position			
	Turns out ⑥* ← → Turns in ④		
Damping force	Soft ← → Hard		

* With the adjuster fully turned lightly in direction ④

CAUTION:

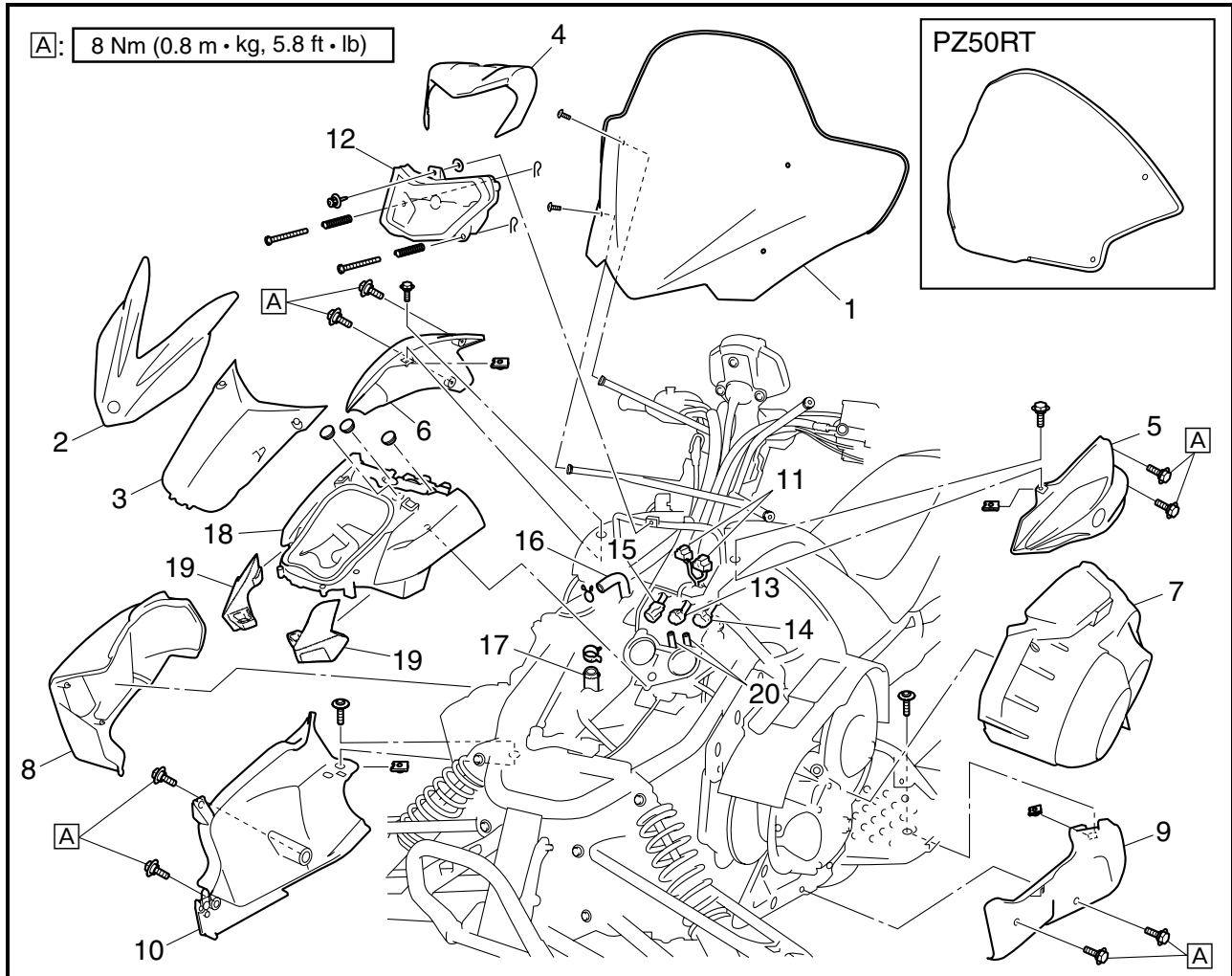
- Do not continue to turn the adjuster in direction ④ after it stops. The shock absorber can be damaged and damping force adjustments cannot be made.
- Do not turn the adjuster in direction ⑥ more than 20 clicks. Even if the adjuster is continually turned after 20 clicks, there will be no change in the damping force.
- Be sure to stop the adjuster at a position where there is a click.



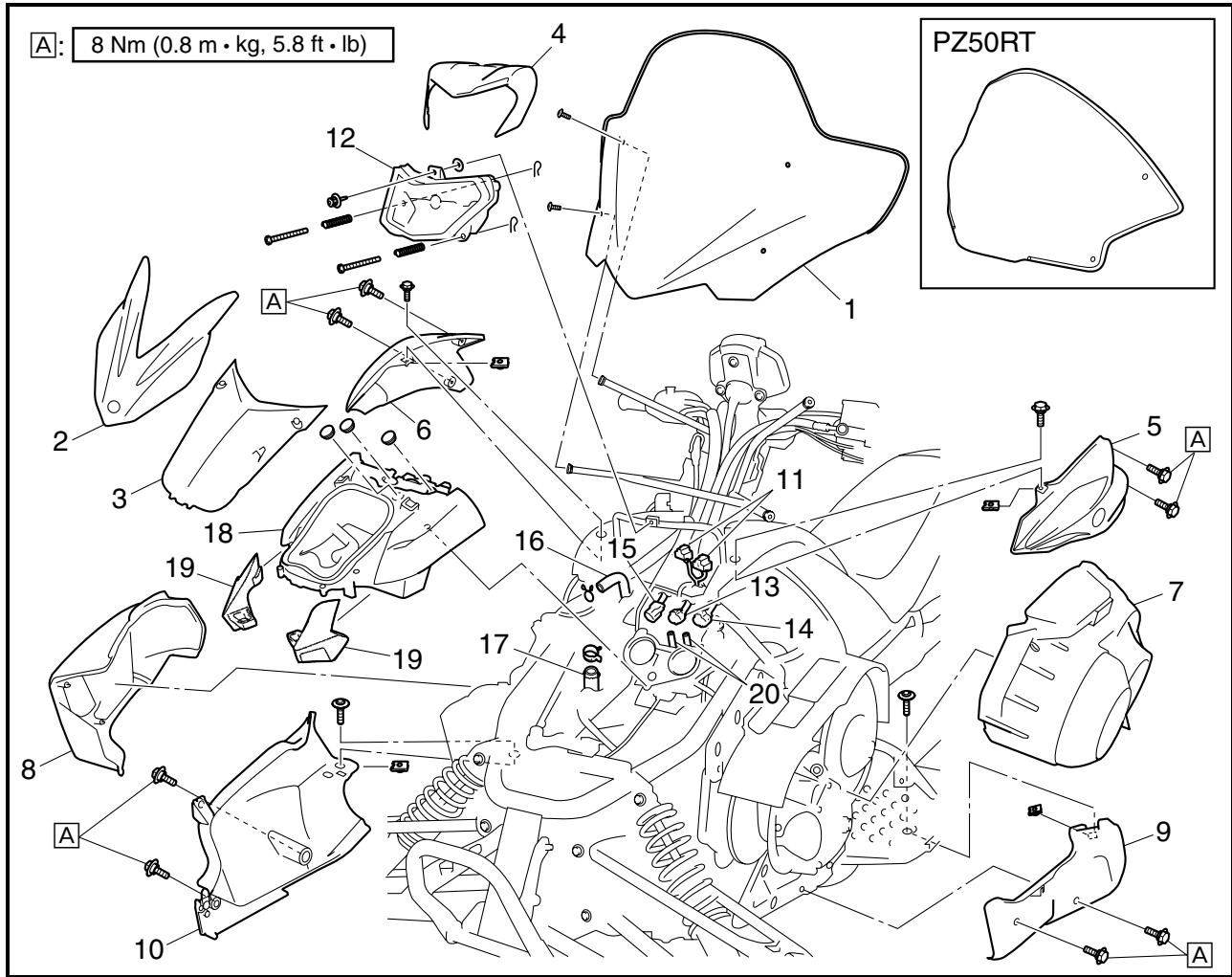
CHASSIS

COWLINGS

PZ50/PZ50GT/PZ50RT/PZ50MT



Order	Job name/Part name	Q'ty	Remarks
	Cowling removal		Remove the parts in the order listed below.
1	Windshield	1	PZ50GT
2	Front panel	1	
3	Air filter case cover	1	
4	Headlight cover	1	
5	Left side panel	1	
6	Right side panel	1	
7	Left side cover	1	
8	Right side cover	1	
9	Left lower cover	1	
10	Right lower cover	1	
11	Headlight coupler	2	
12	Headlight assembly	1	
13	Cylinder-#2 intake air pressure sensor coupler	1	Disconnect.

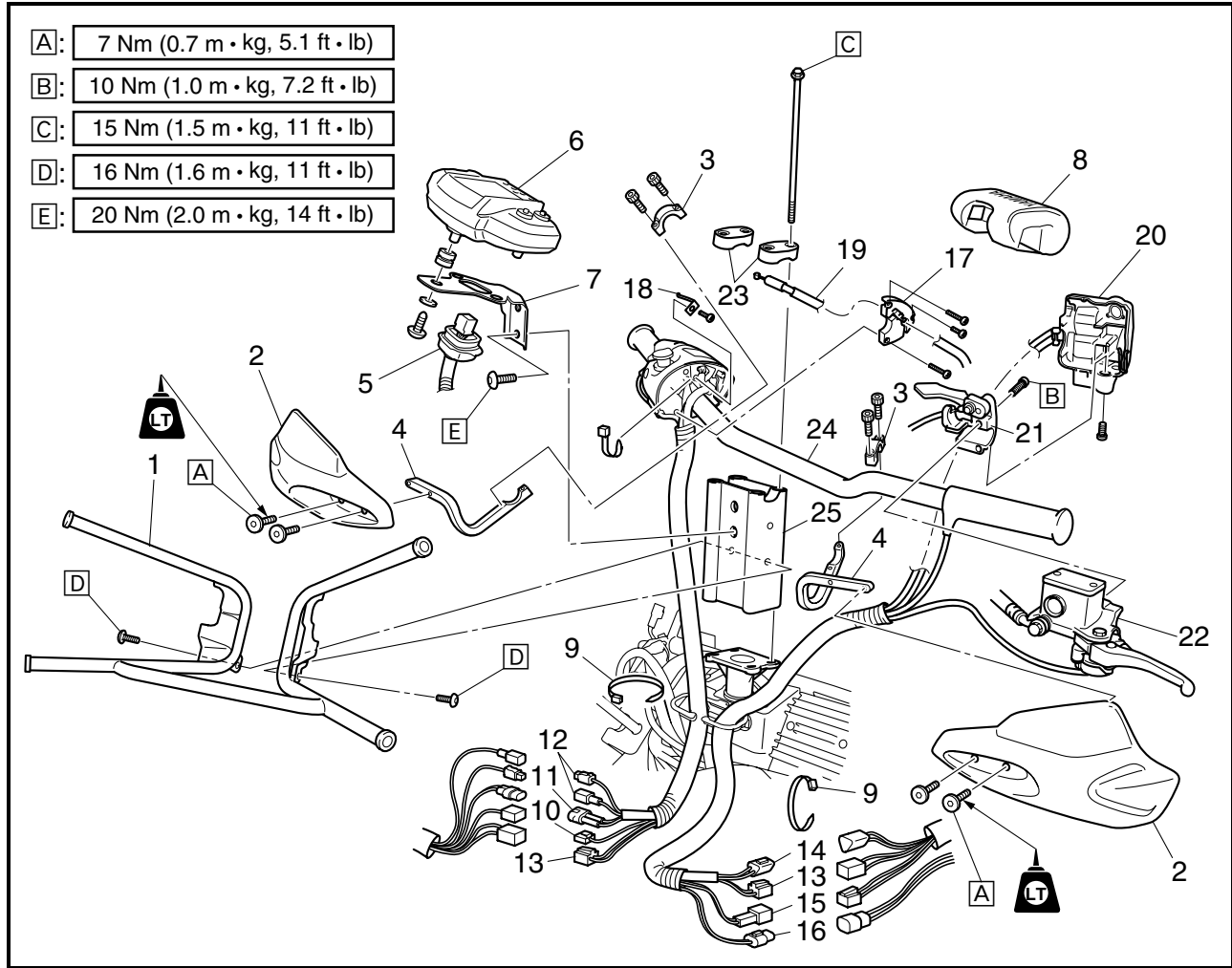


Order	Job name/Part name	Q'ty	Remarks
14	Cylinder-#1 intake air pressure sensor coupler	1	Disconnect.
15	Intake air temperature sensor coupler	1	Disconnect.
16	Cylinder head breather hose	1	Disconnect.
17	Oil tank breather hose	1	Disconnect.
18	Air filter case assembly	1	
19	Air filter case assembly pad (left and right)	2	
20	Intake air pressure sensor hose	2	
			For installation, reverse the removal procedure.

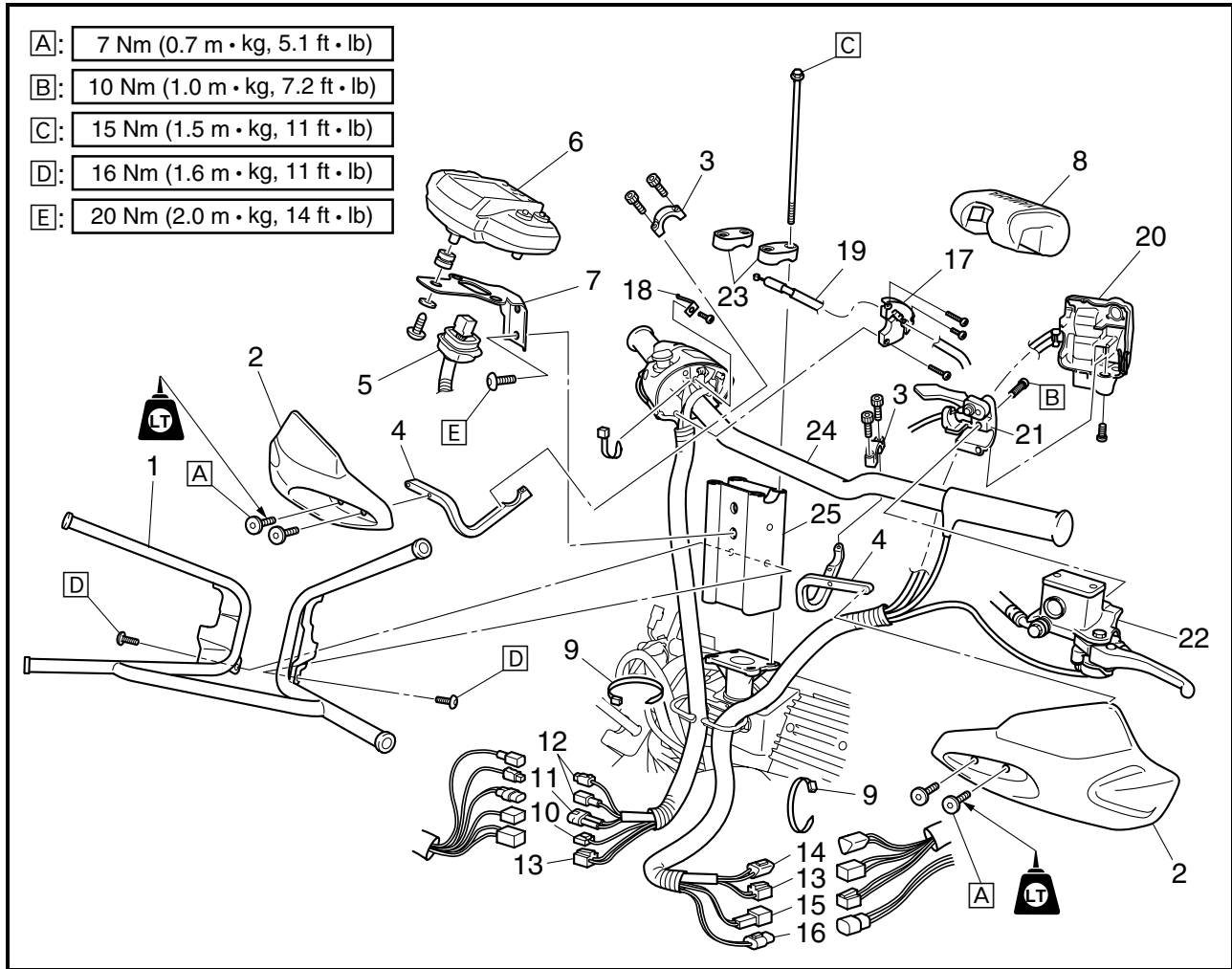


STEERING

PZ50/PZ50GT/PZ50RT/PZ50MT



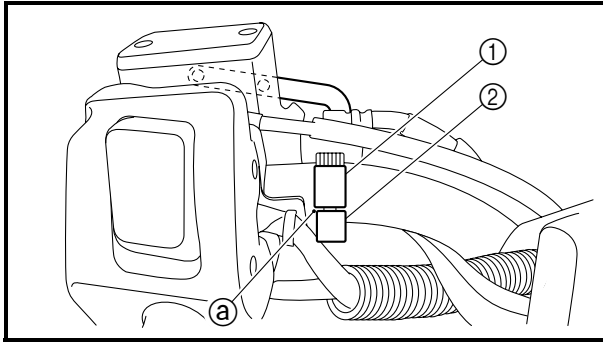
Order	Job name/Part name	Q'ty	Remarks
	Handlebar removal		Remove the parts in the order listed below. Refer to "COWLINGS".
	Windshield/left side panel/right side panel		
1	Windshield bracket	1	PZ50GT/PZ50RT/PZ50MT
2	Wind deflector (left and right)	2	PZ50RT
3	Wind deflector bracket holder	2	PZ50RT
4	Wind deflector bracket	2	PZ50RT
5	Multi-function meter coupler	1	
6	Multi-function meter	1	
7	Multi-function meter bracket	1	
8	Steering pad	1	PZ50GT/PZ50RT/PZ50MT
9	Plastic band	2	
10	Thumb warmer lead coupler	1	Disconnect.
11	Engine stop switch coupler	1	Disconnect.
12	Throttle switch coupler	2	Disconnect.
13	Grip warmer lead connector	2	Disconnect.
14	Grip thumb warmer adjustment switch lead coupler	1	Disconnect.



Order	Job name/Part name	Q'ty	Remarks
15	Brake light switch coupler	1	Disconnect.
16	Headlight beam switch coupler	1	Disconnect.
17	Right handlebar switch cover	1	
18	Throttle cable holder	1	
19	Throttle cable	1	
20	Left handlebar switch	1	
21	Brake master cylinder holder	1	
22	Master cylinder assembly	1	
23	Handlebar holder	2	
24	Handlebar	1	
25	Steering joint	1	

NOTE: _____
 After installing all parts, refer to "CABLE ROUTING", to check the cable and lead routings.

 For installation, reverse the removal procedure.



1. Install:

For PZ50RT

- Wind deflector bracket holder ①
- Wind deflector bracket ②

NOTE:

Align the end of the wind deflector bracket with the punch mark ③ on the handlebar.



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