Update Date : 2019-06-13 Print Date : 2020-02-27

SPRING BRAKE CONTROL VALVE (TYPE-A)

DATA AND SPECIFICATIONS

EN0680202I200010

Type	**Variable pressure control type**
Outlet pressure difference between parking and releasing stroke at a specified lever angle	**Within 147 kPa {1.5 kgf/cm^2, 21.32 lbf/in.^{2}}**

DESCRIPTION

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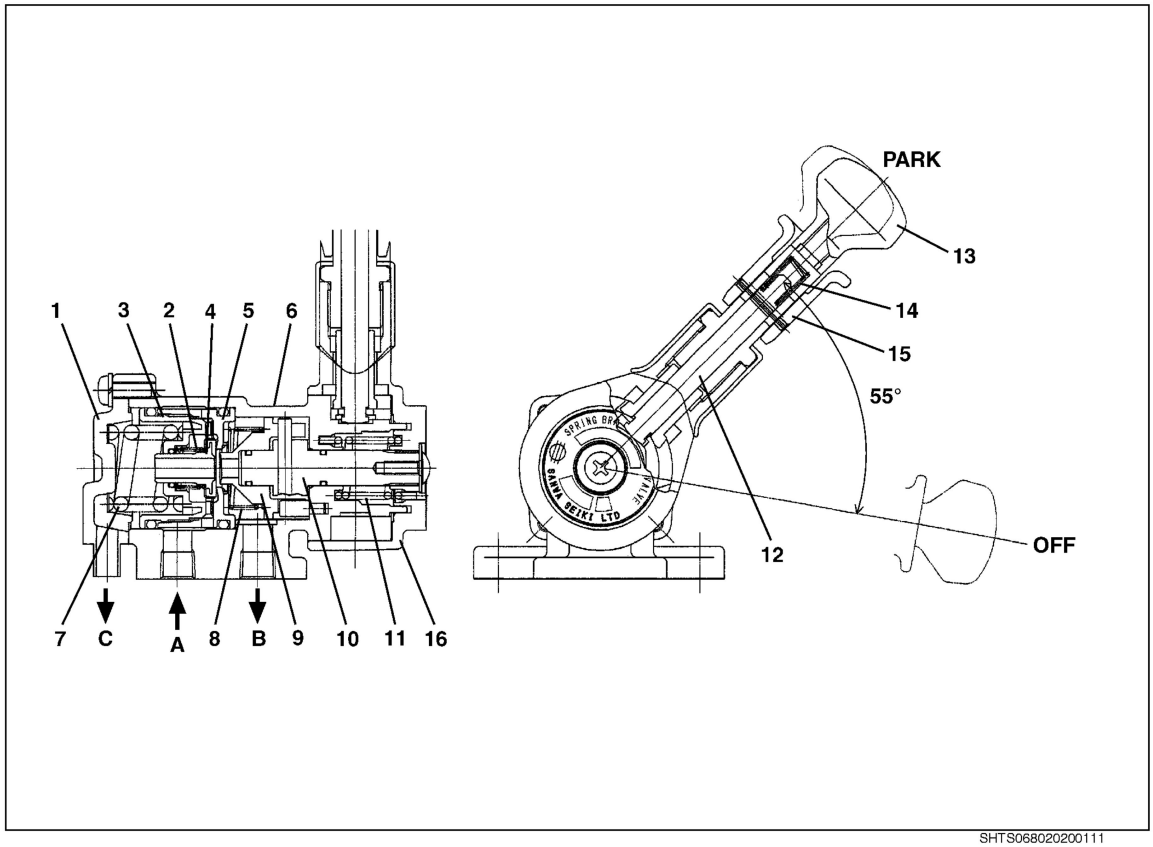

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1	Body cover	11	Handle return spring (If so equipped)
2	Feed valve spring	12	Pull rod
3	Piston	13	Knob
4	Feed valve	14	Compression spring
5	Valve seat	15	Release knob
6	Valve body	16	Handle body
7	Piston spring	A	Inlet
8	Valve spring	B	Outlet
9	Cam	C	Exhaust (PARK)
10	Cam holder		

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COMPONENT LOCATOR

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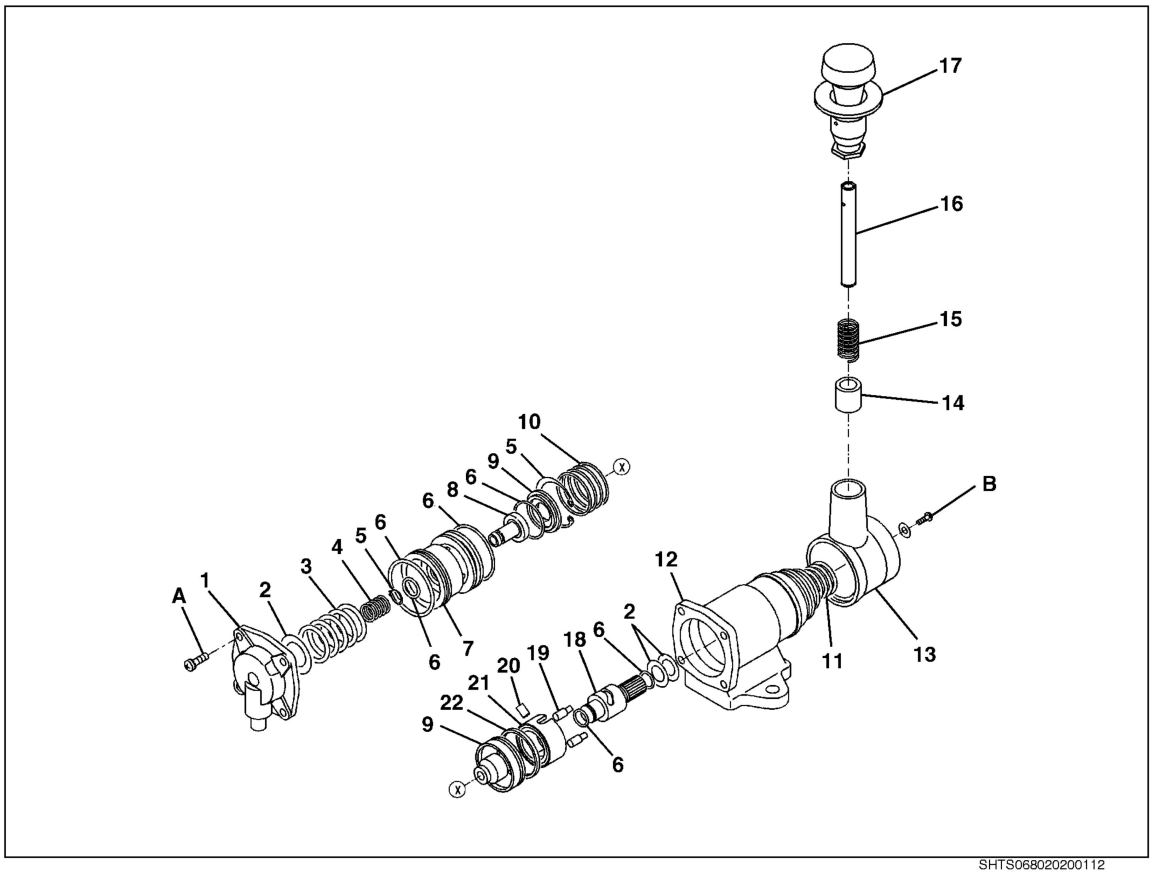

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1	Body cover	9	Valve seat	16	Pull rod
2	Shim	10	Valve seat spring	17	Knob sub assembly
3	Piston spring	11	Handle return spring	18	Cam holder
4	Feed valve spring		(If so equipped)	19	Body pin
5	Retainer ring	12	Valve body	20	Cam holder pin
6	O-ring	13	Handle body	21	Cam
7	Piston	14	Stopper	22	Piston guide
8	Feed valve	15	Compression spring		

Tightening torque **Unit: N·m {kgf·cm, lbf·ft}**

A	5.4-7.4 {55-75, 4.0-5.4}	B	3.4-4.9 {35-50, 2.6-3.6}

OVERHAUL

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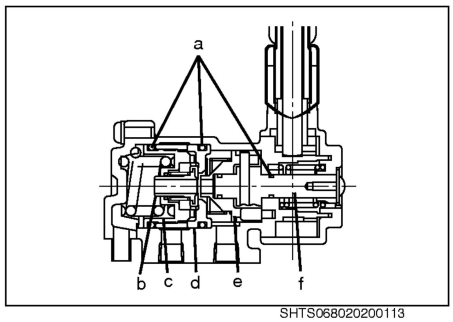

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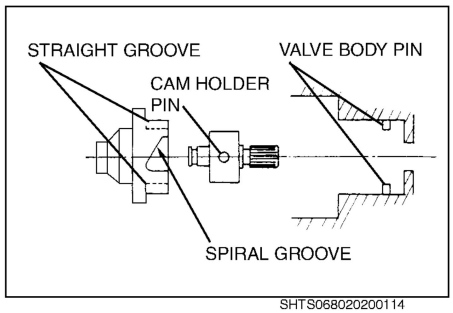
IMPORTANT POINTS - ASSEMBLY

1. LUBRICATION

(1) When assembling the spring brake control valve, replace the feed valve, valve seats and O-rings.

(2) Apply silicone grease to each sliding surface of the assembly parts, O-rings and O-ring grooves.

a. O-ring
b. Feed valve
c. Piston
d. Valve seat
e. Cam
f. Cam holder



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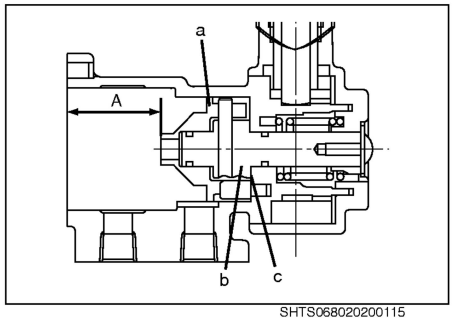
2. ASSEMBLE THE CAM ASSEMBLY.

(1) When assembling the cam and cam holder, make sure that the cam holder pin and spiral groove of the cam are aligned.

(2) When installing the cam assembly to the valve body, the valve body pin and straight groove of the cam must be aligned.



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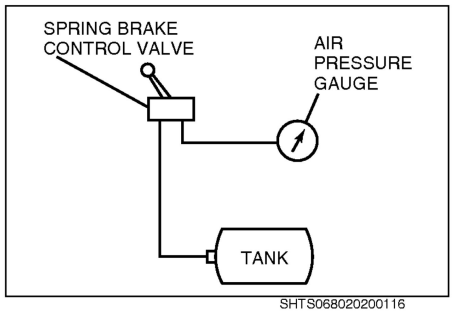
(3) Adjust dimension "A" with the shim.
Assembly standard: 33.8-34.2 mm {1.331-1.346 in.}

a. Cam
b. Cam holder
c. Shim



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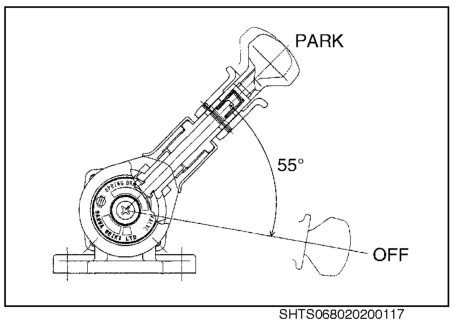
3. SPRING BRAKE CONTROL VALVE PERFORMANCE TEST

(1) First, connect the pressure gauge to the outlet line and apply an air pressure of 980 kPa {10.0 kgf/cm^2, 142 lbf/in.^{2}} to the inlet line.



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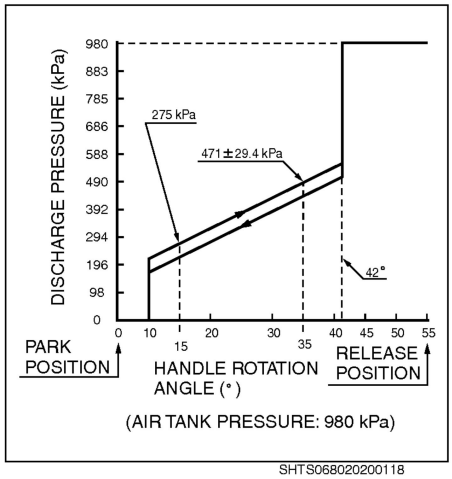
(2) Move the spring brake control lever towards the OFF position, gradually and confirm that the air pressure in the outlet line meets the characteristic shown in figure.

Standard:

Handle angle:	**Outlet pressure: kPa {kgf/cm^2, lbf/in.^{2}}**
15°	**275 {2.8, 39.9}**
35°	**441.6-500.4 {4.5-5.1, 64.0-72.6}**
Over 42°	**980 {10.0, 142}**

NOTICE

The characteristic shown is under the inlet pressure of 980 kPa {10.0 kgf/cm^2, 142 lbf/in^2.}



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(3) Confirm the following functions.

a. The control handle is locked at PARK position.

b. The control handle automatically turn to OFF position when the lever is released at PARK position.

INSPECTION AND REPAIR

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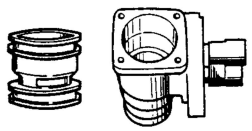
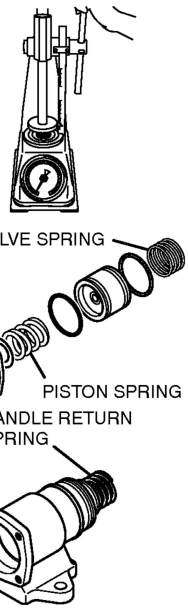
Unit: mm {in.}

Inspection Item	Standard	Limit	Remedy	Inspection Procedure
Piston and valve body: Wear and damage	—	—	**Replace, if necessary.**	**Visual check** 
Cam, pin and cam holder: Wear and damage	—	—	**Replace, if necessary.**	**Visual check** 
Piston spring, valve spring and handle return spring: Free length/ Setting length/ Setting load Crack, rust and damage	**Piston spring 27.9 {1.10}/ 25.0 {0.98}/ 553.1 N {56.4 kgf, 124.34 lbf}**	**500.1 N {51.0 kgf, 112.43 lbf} (Setting load)**	**Replace, if necessary.**	**Measure and visual check** 
	Valve spring 19.6 {0.77}/ 10.5 {0.41}/ 19.6 N {2.0 kgf, 4.41 lbf}	**17.6 N {1.8 kgf, 3.96 lbf} (Setting load)**		
	Handle return spring 19.3 {0.76}/ 13.5 {0.53}/ 7.8 N {0.8 kgf, 1.76 lbf}	**6.9 N {0.7 kgf, 1.55 lbf} (Setting load)**		
Feed valve spring: Rust and damage	—	—	**Replace, if necessary.**	**Visual check**