VOLVO
Construction Equipment

Service Information

Document Title:	Function Group:	Information Type:	Date:
Neutral centring test	**660**	**Service Information**	**2014/3/29**
Profile: **SSL, MC70B [GB]**			

Neutral centring test

Mechanical controls

Op nbr 643-084

1. Raise and block the machine, see 191 Raising and blocking.
2. Put the machine in service position 3, see 191 Service position 3.
3. Start the engine. With engine speed at low idle, stroke levers fully forward and release.
4. Stroke levers fully backward and release.
5. Stroke levers halfway forward and release.
6. Stroke levers halfway backward and release.
7. With engine speed at high idle, stroke levers fully forward and release.
8. Stroke levers fully backward and release.
9. Stroke levers halfway forward and release.
10. Stroke levers halfway backward and release.
11. With engine OFF, randomly stroke levers forward and backward. Start engine and check for wheel rotation.
    If wheels still rotating in either direction when releasing the levers, the steering linkage needs to be adjusted, see 660 Neutral centring and control lever adjustment

    NOTE!
    If the machine is equipped with shock absorbers it could slow the steering control levers return to neutral position. The additional friction of the shock absorber may result in a slight tire rotation. If this rotation cannot be stopped by a very slight “jiggle” of the steering lever, the shock absorber is most likely defective and should be replaced.
12. Lower the machine from the blocks, see 191 Raising and blocking.

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Service Information

Document Title: **Neutral centring and control lever adjustment**	Function Group: **660**	Information Type: **Service Information**	Date: **2014/3/29**
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Neutral centring and control lever adjustment

Mechanical controls

MC60B, MC70B

Op nbr 643-083

1. Put the machine in service position 1, see 191 Service position 1.
2. Raise and block the machine, see 191 Raising and blocking.
3. Disconnect the damping cylinder rod from its mounting.

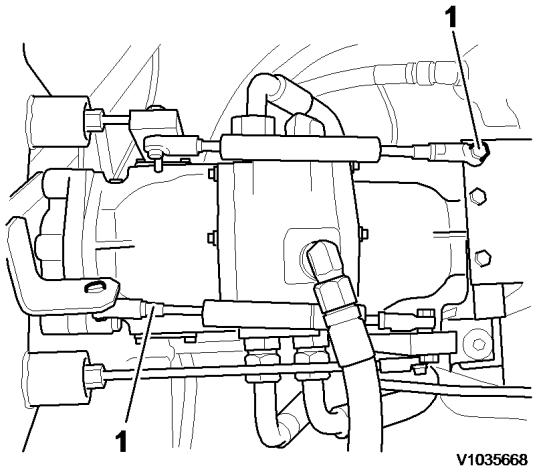

Figure 1

1. Damping cylinder rod, disconnection point

4. Check for play on the steering levers by lightly pushing and pulling the lever. If play is detected, loosen the hex jam nut, and adjust nut to position until there is no play. Retighten the hex jam nut.

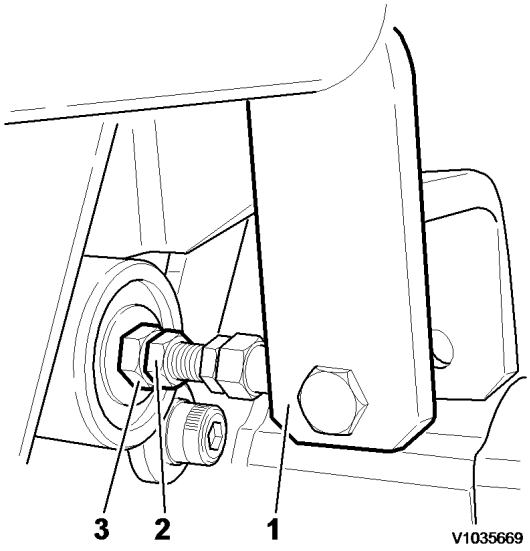

Figure 2

1. Steering lever
2. Hex jam nut
3. Adjust nut

5. If both levers are in a vertical position, skip to Step 10.

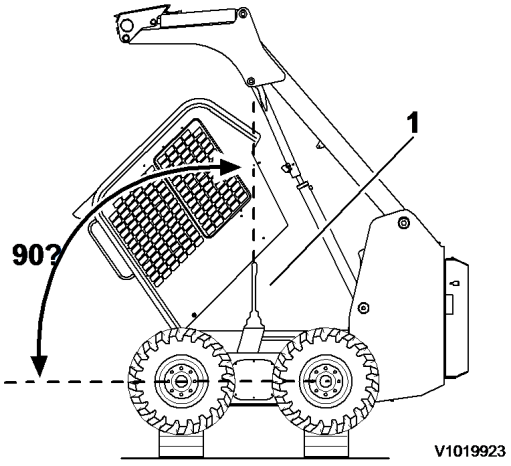

Figure 3

6. Loosen the hex jam nut on the front linkage rod ball joint.

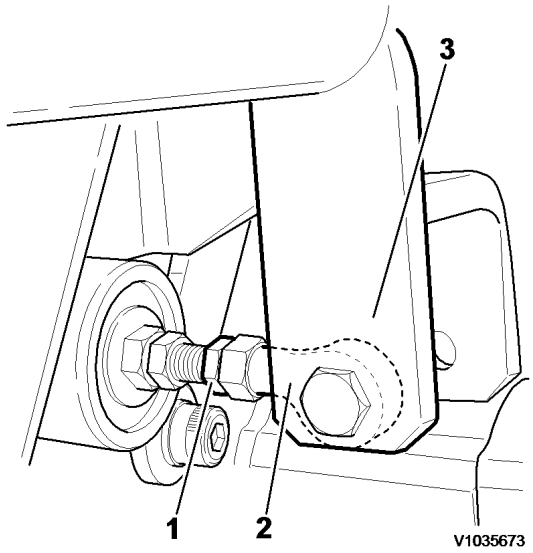

Figure 4

1. Hex jam nut
2. Front linkage rod ball joint
3. Steering lever

7. Disconnect the link rod ball joint from the steering lever .

8. With the steering lever held in a vertical position, adjust the linkage rod ball joint as required.

9. Fit the ball joint to the steering lever. Tighten the ball joint hex jam nut.

10. Start the engine, and set the throttle at “low” idle.
    If the tires on either side of the machine DO turn (creep), the neutral position for the control requires readjustment.

11. Loosen the hex jam nut on the rear linkage rod ball joint.

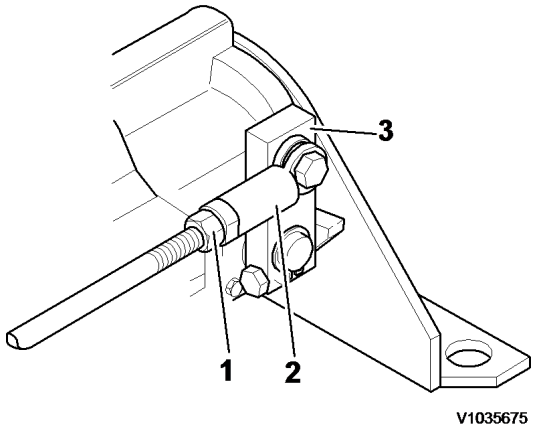

Figure 5

1. Hex jam nut
2. Linkage rod ball joint
3. Transmission lever

12. Disconnect the linkage rod from the transmission lever.

13. If the tires turn rearward, the ball joint should be rotated counterclockwise.
    If the tires turn forward, the ball joint should be rotated clockwise.

14. Reconnect the linkage rod to the transmission lever. Tighten the jam nut against the ball joint.

15. Start the engine, and set the throttle at “low” idle. Check to see if the tires will turn (creep) in either direction. If the tires still tend to turn (creep), the steering lever needs readjustment.

16. Reconnect the damping cylinder to its mounting.

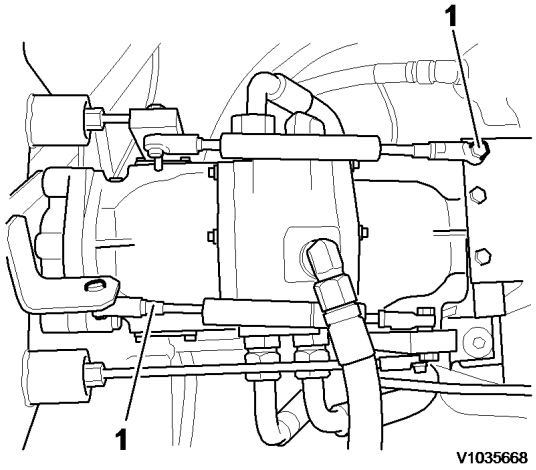

Figure 6

1. Damping cylinder

17. Lower the machine from the service position, see 191 Service position 1.

18. Lower the machine from the blocking, see 191 Raising and blocking.

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Service Information

Document Title: **Neutral centring and control lever adjustment**	Function Group: **660**	Information Type: **Service Information**	Date: **2014/3/29**
Profile: **SSL, MC70B [GB]**			

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Neutral centring and control lever adjustment

Mechanical controls

Op nbr 643-083

This operation also includes required tools and times for applicable parts of the following operations:

- 191 Raising and blocking
- 191 Service position 1

1. Raise and block the machine, see 191 Raising and blocking.
2. Put the machine in service position 1, see 191 Service position 1.
3. Disconnect the damping cylinder rod from its mounting.

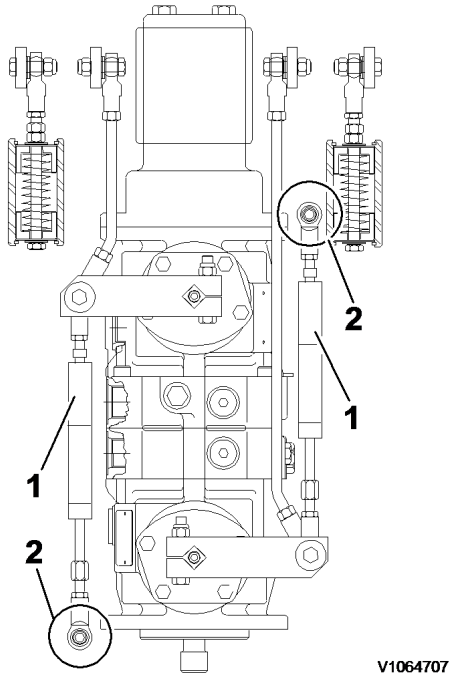

Figure 1

1. Damping cylinder
2. Mounting point

4. Check for play on the steering levers by lightly pushing and pulling the lever. If play is detected, loosen the hex jam nut on the centring spring assembly, and adjust nut to position until there is no play. Retighten the hex jam nut.

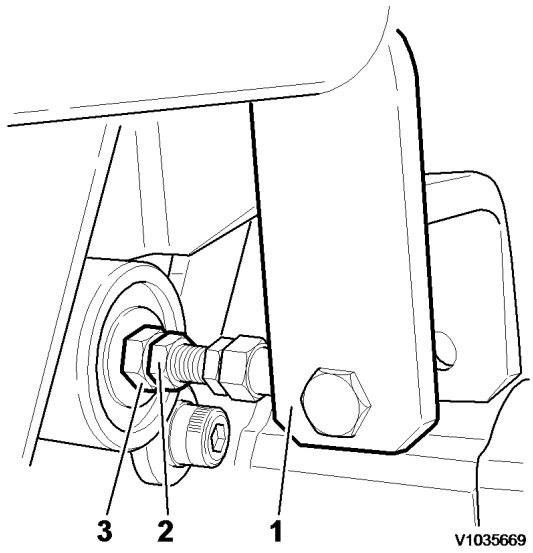

Figure 2

1. Steering lever
2. Hex jam nut
3. Adjust nut

5. If the angle of the control levers needs to be adjusted, follow instructions below or skip to Step 10.

6. Loosen the hex jam nut on the front linkage rod ball joint.

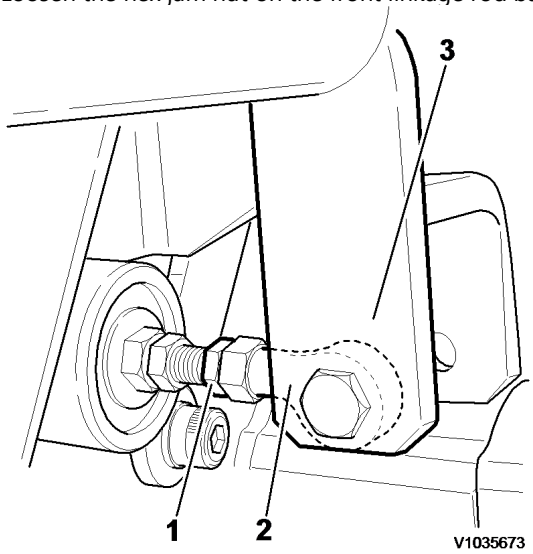

Figure 3

1. Hex jam nut
2. Rod ball joint
3. Steering lever

7. Disconnect the link rod ball joint from the steering lever.

8. With the steering lever held in a vertical position, adjust the linkage rod ball joint as required.

9. Fit the ball joint to the steering lever. Tighten the ball joint hex jam nut.

10. Start the engine, and set the throttle at low idle.
    If the tires on either side of the machine do turn (creep), the neutral position for the control requires readjustment.

11. Loosen the hex jam nut on the linkage rod ball joint.

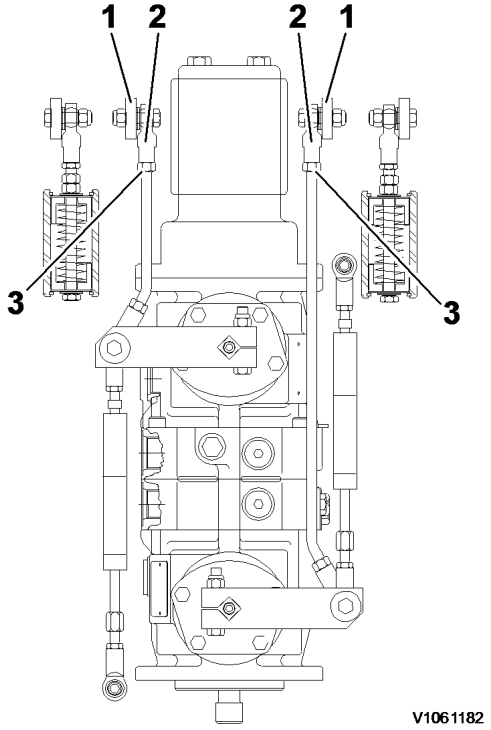

Figure 4

1. Transmission lever
2. Linkage rod ball joint
3. Hex jam nut

12. Disconnect the linkage rod from the lever.

13. Adjust the ball joint as follow:

- If the tires turn rearward the ball joint should be rotated counter clockwise
- If the tires turn forward the the ball joint should be rotated clockwise

14. Reconnect the linkage rod to the lever. Tighten the jam nut against the ball joint.

15. Run the engine in varying rpm, check to see if the tires will turn in either direction. If the tires still tend to turn, the steering linkage needs to be fine adjusted.

16. Loosen the jam nut on the centring spring assembly ball joint. Turn the adjusting cap screw on centring spring assembly until the wheels stop rotating. Tighten the jam nut.

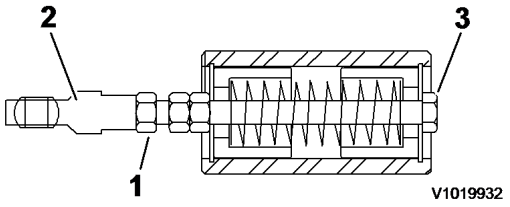

Figure 5

1. Ball joint jam nut
2. Ball joint
3. Adjusting cap screw

17. Reconnect the damping cylinder to its mounting.

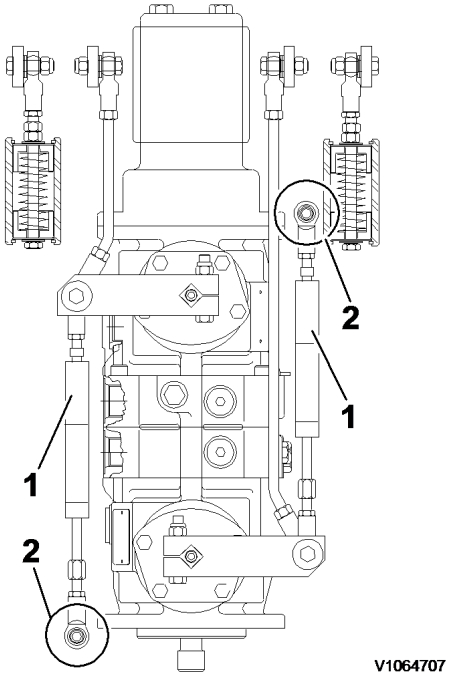

Figure 6

1. Damping cylinder
2. Mounting point

18. Lower the machine from the service position, see 191 Service position 1.

19. Lower the machine from the blocking, see 191 Raising and blocking.

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Service Information

Document Title:	Function Group:	Information Type:	Date:
Transmission pump neutral centering, checking and adjusting	**660**	**Service Information**	**2014/3/29**
Profile: **SSL, MC70B [GB]**			

Transmission pump neutral centering, checking and adjusting

Pilot controls

Op nbr 660-020

11666051 Pressure gauge
14290266 Hose
14290266 Hose
936446 Testing nipple
936446 Testing nipple

This operation also includes required tools and times for applicable parts of the following operations:

- 914 Servo pressure, check
- 191 Raising and blocking
- 191 Service position 1
- 900 Hydraulic system, relieve pressure

NOTE!
The hydraulic oil should be at operating temperature 40-60 °C (104–140 °F).

1. Check the functionality of the control lever, se 914 Servo pressure, check (output pressure).
   If the functionality of the control lever is correct, continue the operation.

2. Raise and block the machine, see 191 Raising and blocking.

3. Put the machine in service position 1, see 191 Service position 1.

4. Relieve the pressure in the hydraulic system, see 900 Hydraulic system, relieve pressure.

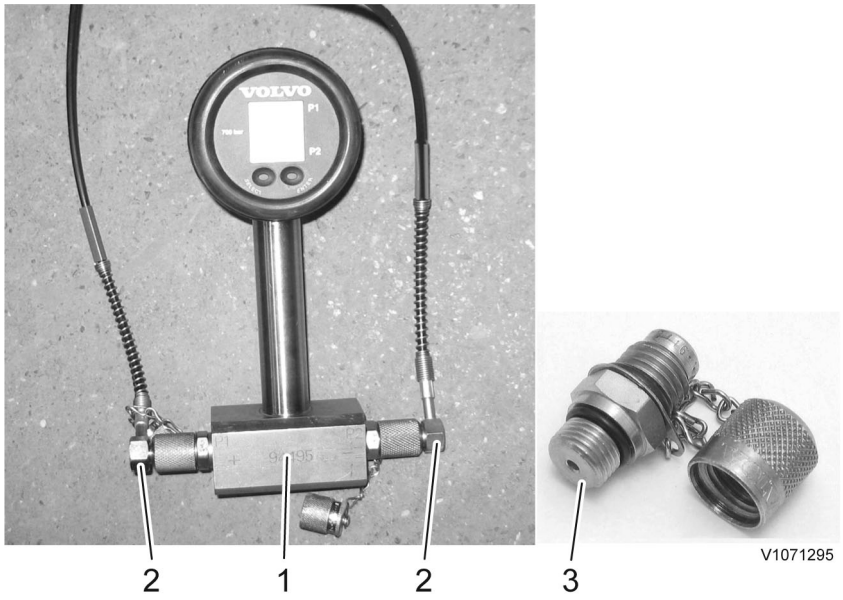

Figure 1

1. 11666051 Pressure gauge
2. 14290266 Hose
3. 936446 Testing nipple x 2

5. **CAUTION**

Maintain greatest possible cleanliness during all work on the hydraulic system.

Install 11666051 Pressure gauge, 14290266 Hose x 2 and 936446 Testing nipple x 2 to the test locations.

- Front pump: test location B and D
- Rear pump: test location A and C

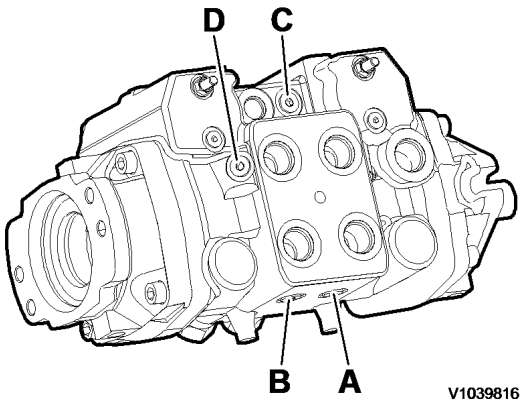

Figure 2

A. Right, reward
B. Left, reward
C. Right, forward
D. Left, forward

6. Start the engine at low idle. Keep the seat bar raised.

7. Loosen the lock nut. Turn the adjusting screw in one direction until one of the systems measures 70 bar (1015 psi).