



INSTRUCTION BULLETIN

No. 340563
Machine: 355/385
Published: 7-02
Rev. 00

NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in your machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save you the cost of ordering an entire kit.

NOTE: Numbers in parenthesis () are reference numbers for parts listed in Bill of Materials.

Installation instructions for **kit number 383102 and 383103**

DESCRIPTION:

This kit contains the parts needed to replace the propel pump and install a shock absorber on the model 355 and 385 sweepers.

Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: HYDRAULIC PRINCIPLES

(Estimated time to complete: 3 hours)

PREPARATION:

HYDRAULIC PRINCIPLES:

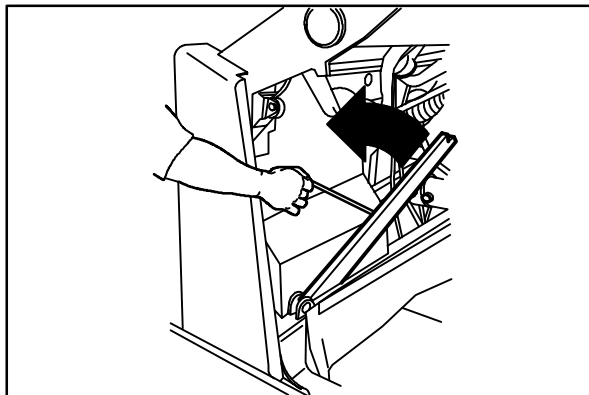
1. Cleanliness is extremely important when working with hydraulic components. Work in a clean, dust-free area. Dirt or foreign material in hydraulic systems can impair operation and damage equipment.
2. Before disconnecting hydraulic hoses or fittings, thoroughly clean outside of hydraulic component to prevent dirt from entering system.
3. Mark hydraulic hoses and record locations for proper installation.
4. Cap disconnected hoses or open ports to keep dirt out of system.
5. Discard any hydraulic fluid drained from the system. Use only new, approved hydraulic fluid to replenish hydraulic reservoir.
6. Flush hose and fittings at pressure port of hydraulic component with air, solvent or hydraulic fluid to help avoid contamination.

FOR SAFETY: Before leaving or servicing machine, stop on level surface and set parking brake. Then turn off machine and remove key.

REPLACE PROPEL PUMP:

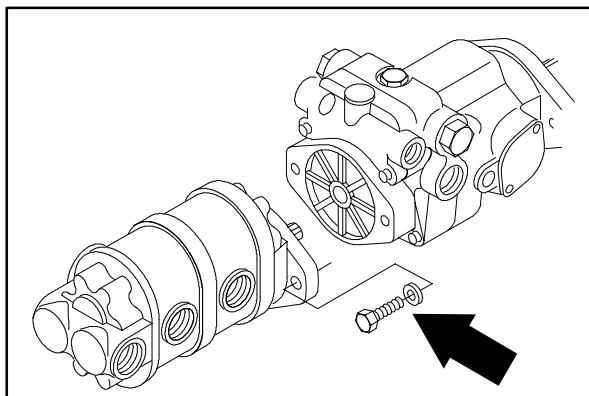
1. Raise the hopper and engage the safety arm.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, Turn Off Machine And Remove Key.

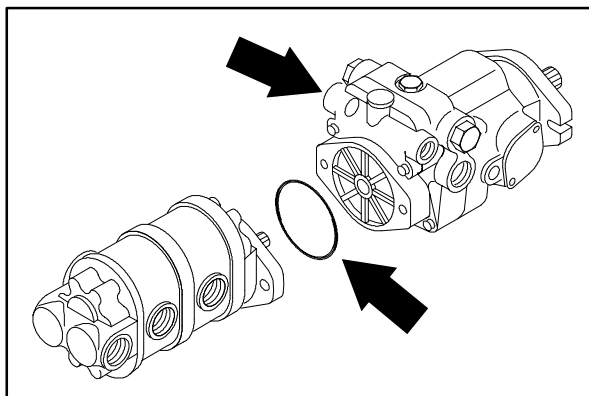


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2. Remove the front dust panel from the machine.
3. Remove the two 0.375 in. hex screws holding the accessory pump to the propel pump 79768 (355) or 79769 (385).

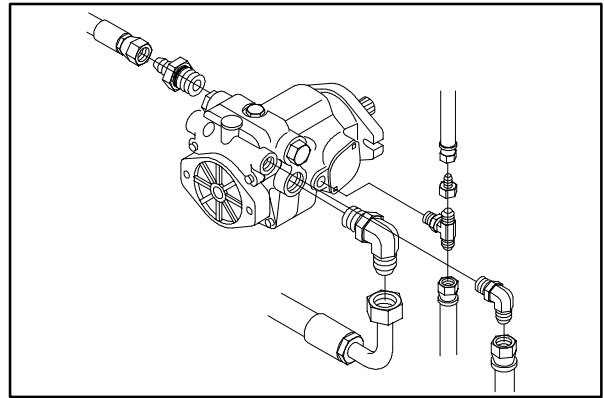


4. Pull the accessory pump straight out of the propel pump 79768 (355) or 79769 (385) without disconnecting the hydraulic hoses. Make sure not to lose the rubber O-ring on the accessory pump.

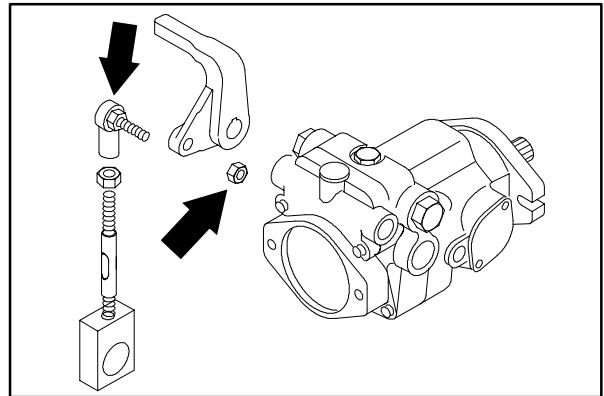


5. Disconnect and plug all of the hoses going to the propel pump 79768 (355) or 79769 (385).

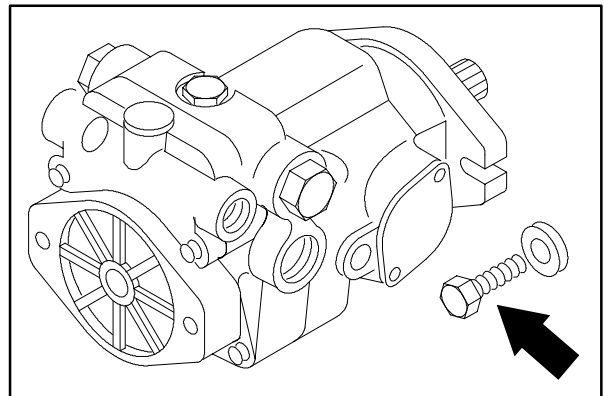
NOTE: Observe hydraulic cleanliness requirements when opening hydraulic lines.



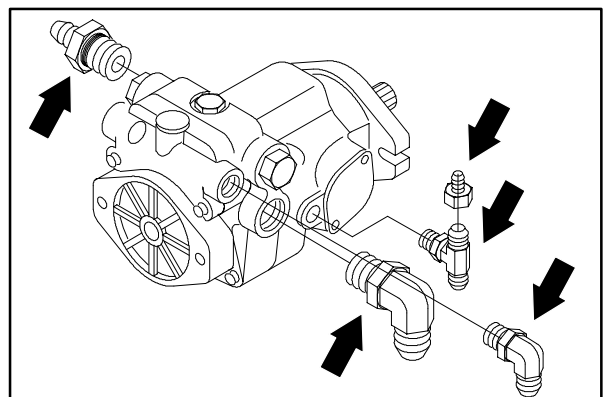
6. Remove the M8 nyloc nut holding the control rod balljoint to directional control arm. Pull the rod out of the arm.



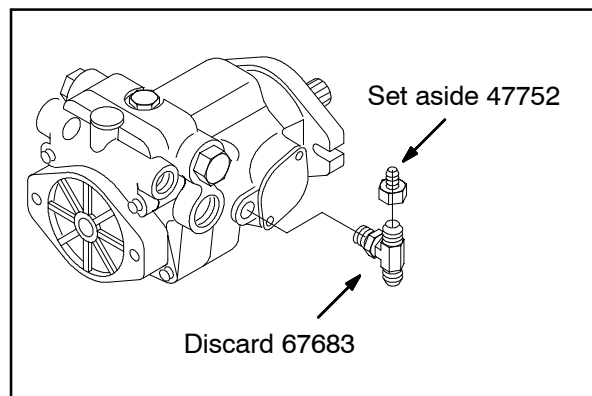
7. Remove the two M10 hex screws holding the propel pump to the bellhousing.
8. Pivot the propel pump clockwise until the directional control arm is clear of the centering spring arms.
9. The propel pump 79768 (355) or 79769 (385) can now be pulled straight back and out of the pump coupling.



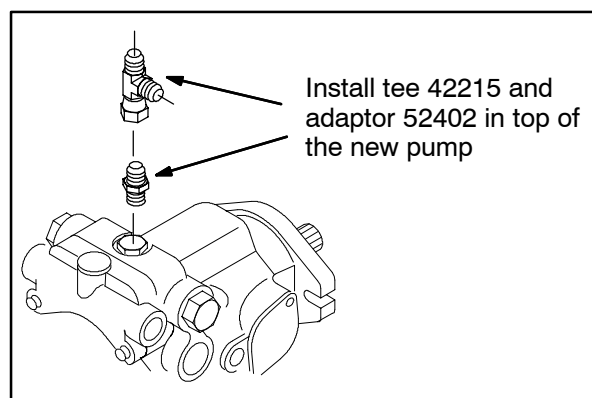
10. Place the propel pump 79768 (355) or 79769 (385) in a vice. Remove all of the hydraulic fittings from the pump and set aside.



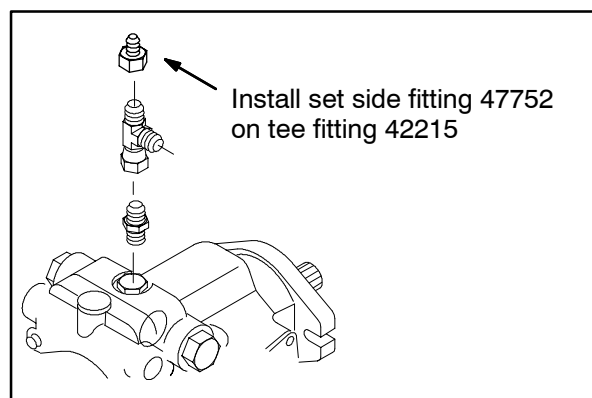
11. Remove fitting 47752 from the top of fitting 67683. Discard fitting 67683. Set fitting 47752 aside.



12. Install tee fitting 42215 in the top of the new pump with adaptor 52402.



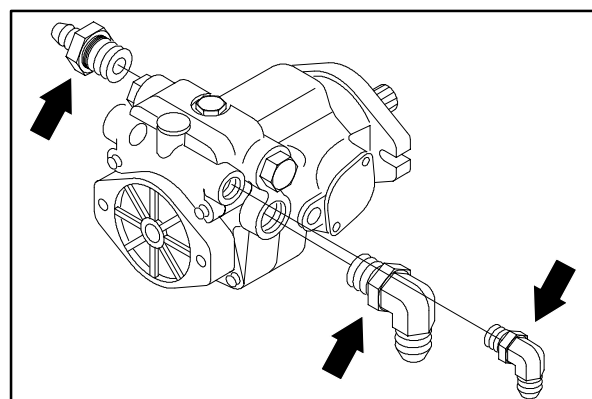
13. Install set aside fitting 47752 on tee fitting 42215.



14. Install all of the remaining set aside fittings in the new pump 373451 (355) or 373452 (385) in the same orientation.

15. Remove the 0.31 in. hex screw holding the directional control arm to the pump shaft. Remove the arm.

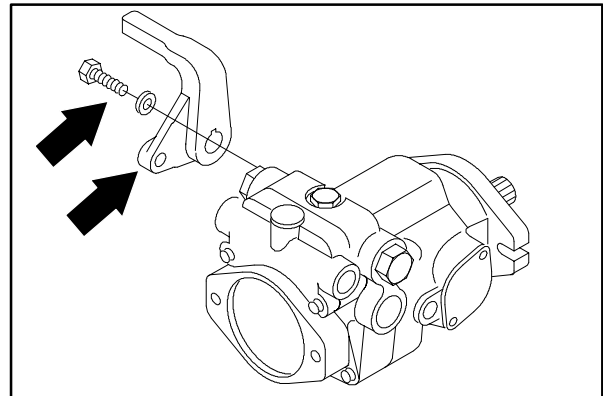
NOTE: The pump control arm is on a tapered shaft and will need to be pried off or removed with a puller.



16. Make sure the key is in place on the directional control shaft when installing the directional control arm on the new propel pump. Use the 0.31 in. fine thread hex screw with blue loctite 242 and tighten to 22-27 Nm (16-20 ft lb).
17. Place some grease on the splines of the input shaft on the propel pump.
18. The new propel pump can now be positioned back in the bellhousing/flywheel area.

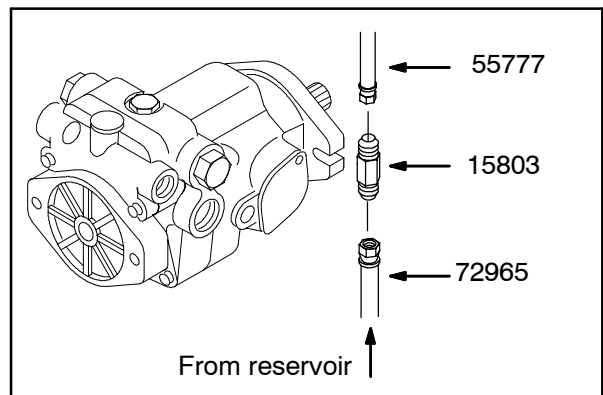
NOTE: Make sure the splines of the pump line up with the splines of the flywheel coupling.

19. Once the pump is all the way in the coupling, rotate it counter-clockwise until the directional control arm is down between the centering spring arms.
20. Reinstall the two M10 hex screws and hand tighten tight.
21. Reinstall the control rod balljoint and rod to the directional control arm. Reinstall the M8 nyloc nut and tighten to 18 - 24 Nm (15 - 20 ft lb).

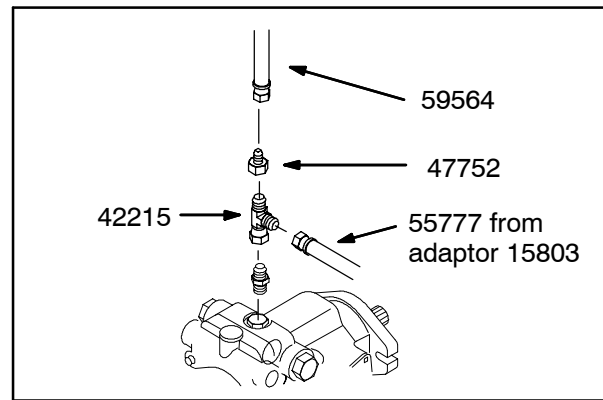


22. Reconnect all of the hydraulic hoses to the propel pump except hose 59573. Remove hose 59573 from the machine, and replace with hose 72965. Connect the propel pump end of hose 72965 to fitting 47752 on top of the propel pump. (Refer to FIG 1)
23. Connect one end of hydraulic hose 72965 to the old hydraulic hose 59573 position on the hydraulic reservoir. (Refer to FIG. 1)

24. Route hose 72965 up to the left side of the propel pump. Connect hose 72965 to 12" hose extension 55777 with union fitting 15803.



25. Connect the open end of 12" hose extension 55777 to the side of tee fitting 42215 on top of the propel pump.
26. Connect the open end of 59564 to the top of tee fitting 42215 with straight fitting 47752. (Refer to FIG 1)

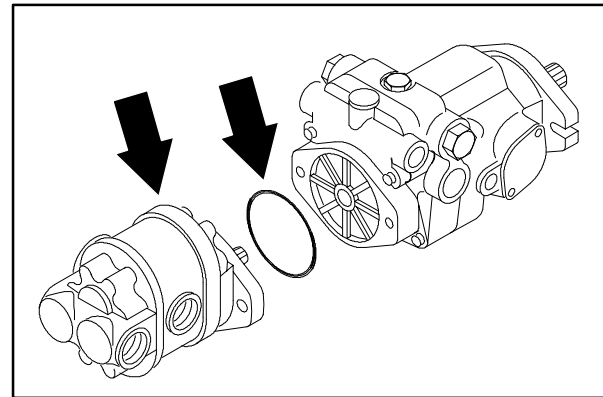


27. Position the accessory pump back in the end of the propel pump.

NOTE: Make sure the rubber O-ring is in place on the accessory pump.

Reinstall the two 0.375 in. hex screws and tighten to 36 – 40 Nm (27 – 30 ft lb). Use loctite 242 blue on the threads.

28. Start the machine, lower the debris hopper and check the propel circuit for proper operation.



WARNING: Lift arm pinch point.
Stay clear of hopper lift arms.

29. Check the hydraulic fluid level, and check all the hoses and connections for leaks.

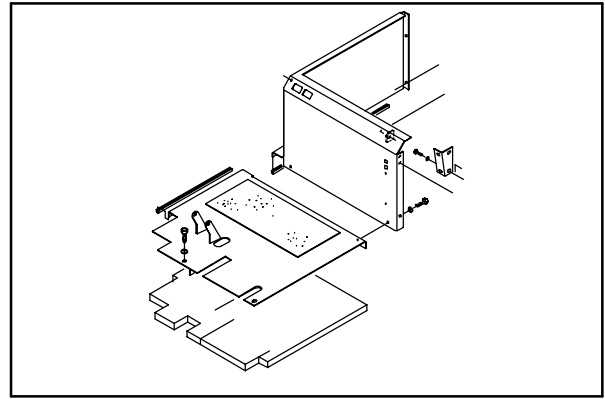
REPLACE DRIVE LINKAGE ROD:

1. Raise the hopper and engage the safety arm.

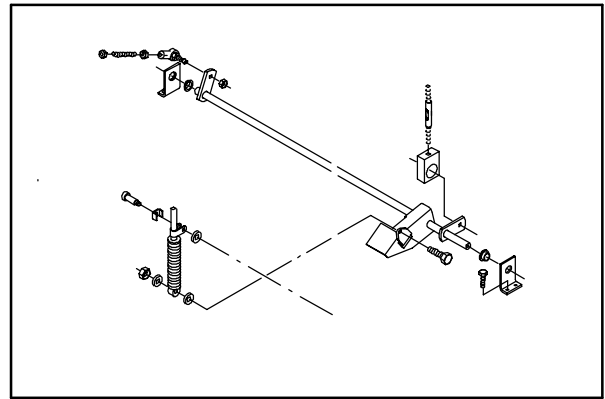


**WARNING: Raised hopper may fall.
Engage hopper support bar.**

2. Remove and set aside the front dust panel.
3. Remove and set aside the floor plate from the operator's compartment.



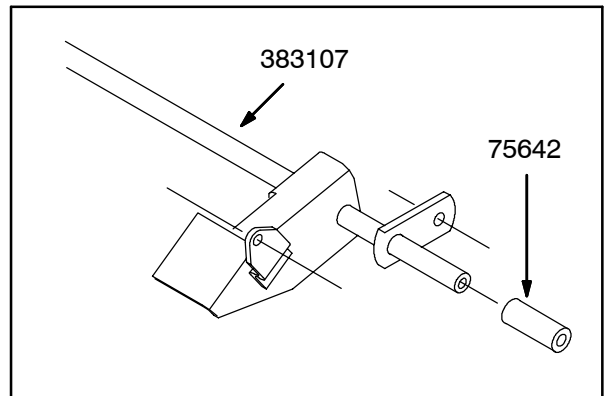
4. Disconnect and remove drive linkage rod 74475 from the machine.



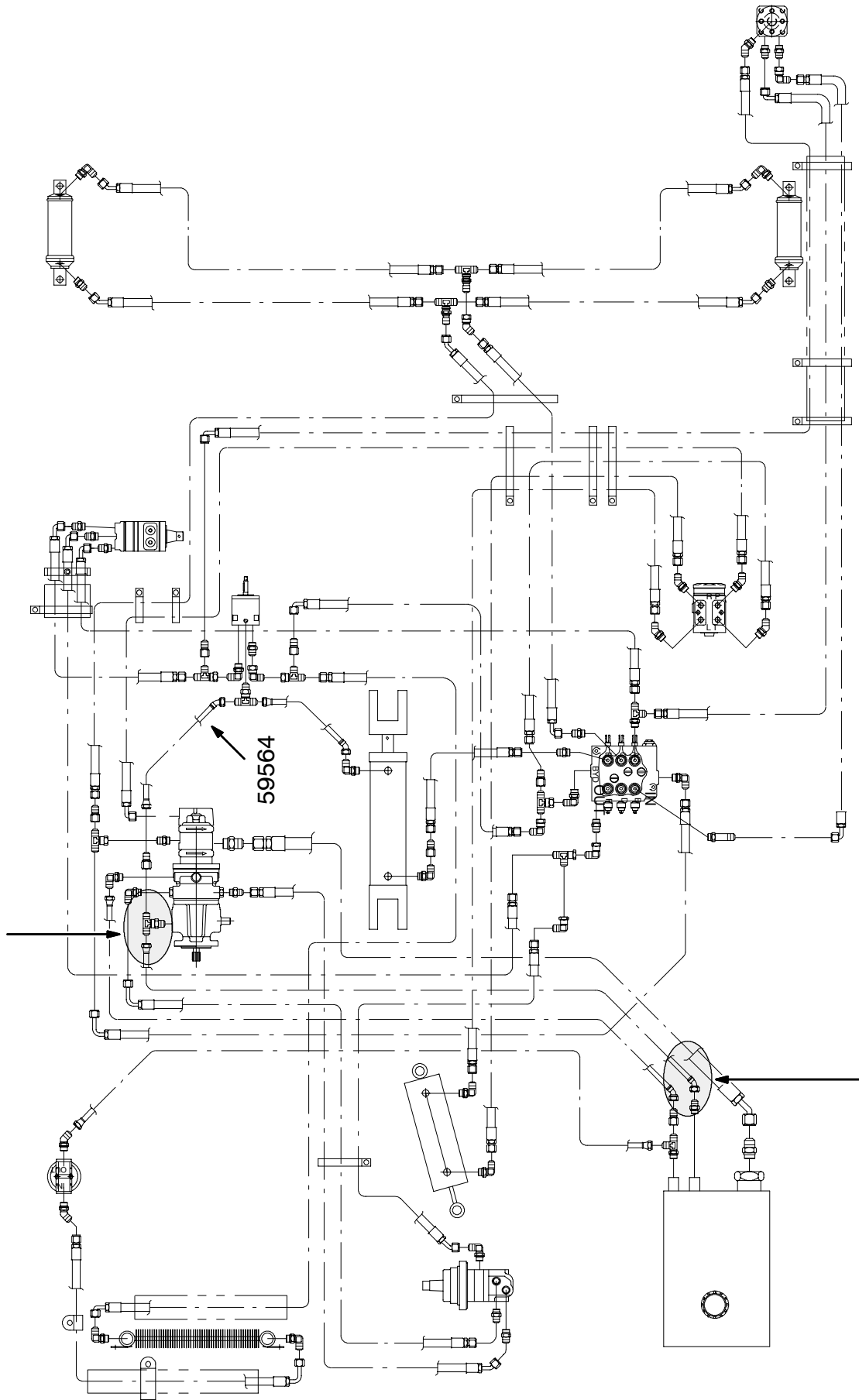
5. Install the new linkage rod 383107 with spacer 75642.
6. Replace the floor plate in the operator's compartment.
7. Reinstall the front dust panel. Tighten the four M8 hex screws to 18 - 24 Nm (15 - 20 ft lb). Lower the hopper.
8. Disengage the safety arm and lower the hopper.



**WARNING: Lift arm pinch point.
Stay clear of hopper lift arms.**



Replace tee fitting 67683 with tee fitting 42215 and adapter 52402
 Replace hydraulic hose 59573 with new hydraulic hose 72965



Replace hydraulic hose 59573 with new hydraulic hose 72965

FIG. 1 - HYDRAULIC HOSE GROUP

BILL OF MATERIALS FOR PROPEL PUMP REPLACEMENT KIT 383102 [355]

Ref.	TENNANT Part No.	Description	Qty.
1	383100	Kit, replmt, pump, propel, [6500]	1
2	74482	Kit, snubber (355L)	1

BILL OF MATERIALS FOR PROPEL PUMP REPLACEMENT KIT 383103 [385]

Ref.	TENNANT Part No.	Description	Qty.
1	383101	Kit, replmt, pump, propel, [6500]	1
4	74482	Kit, snubber (355L)	1

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