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## SERVICE BULLETIN MAINTENANCE OF WAY EQUIPMENT

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**DATE:** 9-2017

**BULLETIN NO:** 17-011

**TITLE:** Grinding Head Accumulator Pre-Charge Pressure Settings

**RATING:**

<input type="checkbox"/>	<b>DIRECTIVE</b> (Action Is Required)	<input type="checkbox"/>	<b>ALERT</b> (Potential Problem)
<input checked="" type="checkbox"/>	<b>INFORMATION</b> (Action Is Optional)	<input type="checkbox"/>	<b>PRODUCT IMPROVEMENT</b> (Enhance Product)

**PRODUCT SERIES / MODEL:** RSP16A1-26, RGE16A1-01 and RGE16A1-02

**SERIAL NO:** Singapore LTA Machines: SBST NEL, SMRT and SBST DTL

**SUMMARY:** The grinding head accumulators are used to help smooth the movement of the grinding heads as they are lowered and raised from the rail. The accumulators also provide a reserve of hydraulic pressure and oil volume that is used when all of the grinding heads are raised from the rail at the same time. This Service Bulletin will instruct the maintenance personnel on how to set the pre-charge for both the head feed and head retract circuits.

**OPERATIONAL IMPACT:** The pressure setting instructions in this Service Bulletin will be used to ensure the nitrogen pre-charge for both the grinding head feed and head retract circuits are properly set.

**ACTION:** Follow the instructions in this Service Bulletin to check and adjust the accumulator pre-charge pressure to:

Head Feed Circuit: 69.0 Bar (1,000 PSI)  
Head Retract Circuit: 20.7 Bar (300 PSI)

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## Safety Information



- **FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURES AND MACHINE ENERGY CONTROL PROCEDURE TO DISABLE ENERGY SOURCES WHEN PERFORMING MAINTENANCE, MAKING ADJUSTMENTS OR REPAIRS TO THE RAIL GRINDER. FAILURE TO HEED THIS WARNING COULD RESULT IN SEVERE BODILY INJURY.**

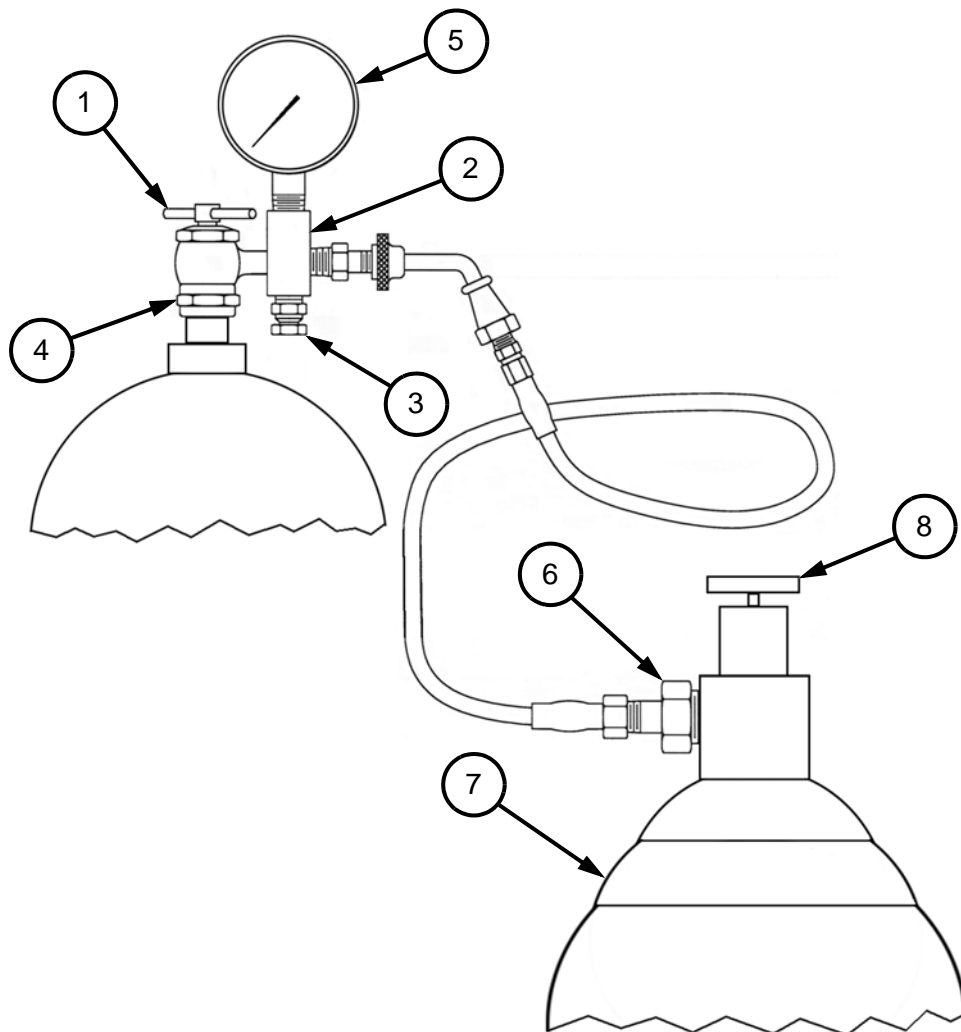
### Checking And Charging Accumulators - See Figure 1

1. The accumulators are used to help smooth the movement of the grinding heads as they are lowered and raised from the rail. The accumulators also provide a reserve of hydraulic pressure that is used when all of the grinding heads are raised from the rail at the same time.
2. There are two accumulators on each of the two grind cars for the 16-stone machine consist. The accumulators are located above the water tank, supported by a bracket connected to the bottom side of the main enclosure roof.
3. The two accumulators are set at different pre-charge pressures. The pressures are:
  - a. Head Feed Circuit: 1000 ± 5 PSI 69.00 ± 0.34 Bar  
*Note: The feed circuit is the circuit with the compensator set at 1500 psi. See the hydraulic schematic.*
  - b. Head Retract Circuit: 300 ± 2 PSI 20.68 ± .14 Bar  
*Note: The retract circuit is the circuit with the compensator set at 375 psi. See the hydraulic schematic.*
4. All hydraulic pressure must be relieved from the system before charging the accumulators. Use Harsco Rail nitrogen charging kit #152783-1 to check and charge the accumulators.
5. Remove gas valve guard and gas valve cap from the accumulator.
6. Rotate the gas chuck "T" Handle (1) counter-clockwise all of the way out before attaching charging assembly (2) to the accumulator gas valve.
7. Make sure the bleed valve (3) on the charging assembly is closed.
8. Attach swivel nut (4) to the gas valve and tighten to 1.13 - 1.69 N-m (10-15 lb-in).
9. Turn gas chuck "T" Handle (1) until the gauge (5) starts showing the pressure in the accumulator. Do not turn the "T" Handle all the way down, as it will damage the valve core.
10. If the pressure indicated on the gauge is the desired pressure as show in Step 3 above, go to Step 13. If not, the accumulator will need to be charged, or the charge will need to be reduced.
11. When charging the accumulator, use only nitrogen that is free of any contaminates. Connect charging hose end (6) to the nitrogen bottle (7).

**Checking And Charging Accumulators - See Figure 1**

12. Crack open nitrogen bottle valve (8) and slowly add nitrogen to the accumulator. Close the valve when gauge indicates desired charge. Let the charge set for 10 to 15 minutes. This will allow the gas temperature to stabilize.
13. If the desired charge is exceeded, close nitrogen bottle valve, then slowly open bleed valve (3). Do not reduce charge by depressing valve core with a foreign object. High pressure may rupture rubber valve seat.
14. When finished checking or charging the accumulator, turn "T" Handle (1) all the way out and then open bleed valve (3).
15. Remove charging hose from nitrogen bottle. Remove charging assembly (2) from the accumulator.
16. Check for charge leak at the valve core using a common leak reactant.
17. Replace gas valve cap and tighten to 1.13 - 1.69 N-m (10-15 lb-in). Gas valve cap serves as a secondary seal. Replace accumulator gas valve guard cap.

FIGURE 1  
CHECKING AND CHARGING ACCUMULATORS



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