

SCARBOROUGH SERVICE/WORK CARS

There are presently three work cars servicing the Scarborough RT line, one locomotive (ST-1), one flat/crane car (ST-2) and one grinding truck (ST-3). Manufactured by Niigata Engineering Co. Ltd. (Tokyo, Japan), they were placed in service in October and November, 1984.

<u>Specifications</u>	<u>ST-1</u>	<u>ST-2</u>	<u>ST-3</u>
Length Over Coupler	12.7 m	12.7 m	4.76 m
External Width	2.5 m	2.5 m	2.5 m
Height	3.13 m	3.13 m	2.09 m
Weight	33 t	24.5 t	11.4 t
Truck	Niigata	Niigata	Niigata
Truck Centres	7.94 m	7.94 m	N/A
Wheel Base	1.9 m	1.9 m	1.9 m
Wheel Diameter (New)	660 mm	660 mm	660 mm
Propulsion	Cummins NTA-855-L3 (400 H.P.) Torque con- verter drive to each truck, driv- ing all axles.	Non-powered	Non-powered
Brake System	Mitsubishi automatic (self-lapping) and maxi brake.		
Max. Speed	60 km/h	-	-

OTHER FEATURES

1. ST-1

- 1.1 A VOBC (Vehicle On Board Computer) with Cab Signalling and Emergency Modes will be installed.

The VOBC will supervise the operation of the locomotive by interfacing with the System Management Centre (SMC). Speeds, aspects displays, etc. are the same as those on the ICTS cars.

In the event of speed/safety distance violation, the VOBC will put the vehicle into emergency braking by dumping the brake pipe.

- 1.2 Foot pedal deadman interlocks are provided.
- 1.3 Two trip switches, one at each end, are provided.

- 1.4 The low voltage system on the locomotive is 24 V for the controls and lights; 36 V for the VOBC and Communication equipment.
- 1.5 An auxiliary AC generator is provided to power the 4 duplex outlets with 120 V, 60 Hz current for hand tools.
- 1.6 A RMS radio communication unit, with two handsets, is provided.
- 1.7 A 24 V DC auxiliary air compressor is provided to supply air to the air start reservoir in the event that air pressure becomes low due to long storage (over a week).

2. ST-2

- 2.1 A propane powered Wajax crane model PK 7000 is provided, complete with outriggers mounted under the deck.
Lifting capability of crane is 1500 lb. at 30 ft.
- 2.2 Wood panels and two stake sizes of approx. 2 ft. and 6 ft. are provided for transporting maintenance material or snow.
- 2.3 Emergency brake pull cord is located adjacent to the crane power pack.
- 2.4 The maximum deck load is 6,500 kg.

3. ST-3

- 3.1 Two water tanks (900 litre each) are installed on deck for grinding stone lubrication.
- 3.2 Grinding stones are secured by hexagonal turn buckle and wedge arrangement.
- 3.3 Grinding stones are raised and lowered pneumatically.
- 3.4 Six stones, 3 on one carriage, are provided on each side of truck.
- 3.5 Stone downward air pressure is adjustable in the locomotive cab, up to 500 kPa.
- 3.6 Stone operations are controlled by switches in the cab side console.
- 3.7 3 concrete blocks are used as ballast.

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S.C. Lam
Equipment Engineer
Equipment Department