

Manutes John

From: Hicks, Steve
Sent: Wednesday, August 4, 2021 2:41 PM
To: DeDonato, Matthew
Subject: FW: Supplemental information

Additional documents

Stephens Hicks
Chief Mechanical Officer - MBTA
[REDACTED]

From: Hicks, Steve
Sent: Wednesday, August 4, 2021 4:24 PM
To: Manutes John <john.manutes@ntsb.gov>
Cc: Stoothoff, Erik <estoothoff@MBTA.com>; Ester, Ronald <rester@MBTA.com>
Subject: FW: Supplemental information

John

The answers you requested are below.

Stephens Hicks
Chief Mechanical Officer - MBTA
[REDACTED]

From: Gentilucci, Joseph <[REDACTED]>
Sent: Wednesday, August 4, 2021 11:22 AM
To: Hicks, Steve <[REDACTED]>
Subject: Supplemental information

- **Vehicle Description to include:**
 - **Manufacturer 3697 /3705 - Kink Sharyo Corporation, 3862/ 3894- Ansaldo Breda**
 - **Year Built 1986/7 (3697) and 1996/7? (3705), 1997/98 (3862 & 3894)**
 - **Mileage- 3697/1089887, 3705/725897. 3862/477667, 3894/376542**
 - **Rehabilitation date(s)**
 - **SSO Conditional acceptance**
 - **3697 on 8/16/17**
 - **3705 on 10/4/18**
 - **3862 N/A**
 - **3894 N/A**

Joseph Gentilucci
Deputy Chief Mechanical Officer
Massachusetts Bay Transportation Authority
[REDACTED]

email: [REDACTED]



Manutes John

From: Hicks, Steve
Sent: Wednesday, August 4, 2021 2:42 PM
To: DeDonato, Matthew
Subject: FW: Supplemental Vehicle Information

[Additional documents](#)

Stephens Hicks
Chief Mechanical Officer - MBTA
[REDACTED]

From: Hicks, Steve
Sent: Wednesday, August 4, 2021 3:20 PM
To: Manutes John [REDACTED]
Cc: Stoothoff, Erik [REDACTED]; Ester, Ronald [REDACTED]
Subject: RE: Supplemental Vehicle Information

[John](#)

The AW3 weight is 117,000 lbs. for the #8 fleet. I attached a general vehicle sheet below.

2-2 Vehicle Familiarization

2-2.1 Vehicle Characteristics

The vehicle specifications are listed below (refer to fig. 2-1):

Construction: Low-alloy high-tensile (LAHT) steel (Underframe, Cab structure, End structure and Sidewalls structure), Aluminum (doors, external sidewall cover sheet), AISI 301LN (Roof).

Length of car:

- Overall: 74.6 ft
- On center line over anticlimber: 72 ft.
- Over coupler pulling faces: 74 ft.

Overall width of car

- Side Sheets - Floor Level 8 ft. 8 in.
- Side Sheets - Roof Eave 8 ft. 2 in.

Maximum height of car

- from top of roof to top of rail (static) 11 ft.
- from top of roof equipment to top of rail (static) 11 ft. 10 in.
- from top of roof equipment to top of rail (dynamic) 11 ft. 11 1/2 in.

Height of car floor from top of rail

- End floor over motor trucks 35 in.
- Center floor area between motor trucks 14 in.

Height of center line of coupler face from top of rail 16 in.

Minimum clearance from top of rail to coupler over crest and sag vertical curves 2 in.

Height, floor to bottom of window sheet opening 33 in.

Height, floor to low ceiling under the air conditioner (minimum at car centerline) 6 ft. 8 in.

Height, floor to ceiling, in articulation section (minimum at car centerline) 6 ft. 8 in.

Height, floor to normal headlining of car (minimum at car centerline) 6 ft. 10 in.

Width of side door openings 4 ft. 2 in.

Width of end door opening 3 ft. 6 in.

Height, side door openings over threshold	6 ft. 6 in.
Height, end door opening over step	6 ft. 6 in.
Height from top of rail to centerline of anticlimber	27 in.
Minimum double-seat width	2 ft. 11 in.
Minimum aisle width	3 ft. 1 in.
Distance between truck centers	24 ft.
Truck wheel base	6 ft. 3 in.
Back-to-Back Dimension	4 ft. 6 3/16 in.
Wheel diameter (new) - Motor Truck	28.00 in.
Wheel diameter (new) - Trailer Truck	26.00 in.
Wheel wear before replacement	2.00 in. (on the diameter)
Weights:	
AW0: Empty car operating weight	86,000 lb.
AW1: Seated load car weight based on 46 passengers and 1 operator	93,238 lb.
AW2: Service load car weight based on seated load plus 77 standing	108,000 lb.
AW3: Crush load car weight based on service load plus 154 standing	117,000 lb. (Negotiated)
Passenger Capacity:	
AW1: Seated	44
AW2: Service	123
AW3: Crush	200
Maximum Design Speed:	55 mph
NOTE: In case the maximum allowed speed limit (55 mph) is exceeded, the system logic removes power.	
Maximum Towing Speed (with half of the train propulsion systems non-operative)	25 mph
Maximum Full Acceleration (rate):	2.8 mphps (AW0-AW2)
Instantaneous Acceleration rate:	0.1 mphps (with the Master Controller handle in the Minimum Power position)

Stephens Hicks
 Chief Mechanical Officer - MBTA
 617.594.8021

From: Hicks, Steve
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John

The Type *8 general; assembly drawing is attached. Passenger count below. Will have AW3 shortly.

STANDEES FLOOR AREA 19,25mq.(207.2sq/ft)

PASSENGERS	AW2	AW3
OPERATOR	1	1
SEATED	44	44
STANDING	77	154
TOTAL	122	199

Stephens Hicks
 Chief Mechanical Officer - MBTA

From: Manutes John [REDACTED]
Sent: Tuesday, August 3, 2021 5:25 PM
To: Hicks, Steve [REDACTED]
Subject: Supplemental Vehicle Information

Hi Steve,

Thank you again for all of your help this week. I would like to supplement the field notes with additional information about the vehicles. Could you please provide the following information for each vehicle (3862, 3705, 3894, and 3697)?

- Vehicle Description to include:
 - Manufacturer
 - Year Built
 - Mileage
 - Rehabilitation date(s)
- Monetary damage estimates

Thank you, John



John Manutes
 Railroad Accident Investigator
 Denver, Colorado

Web: www.nts.gov

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