



## Hale Trailer Brake & Wheel

A006865

VIN: 013788



53'GN Tandem

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### 1. General

The chassis is designed for use in stevedoring and transporting of 53 ft Hi-cube domestic containers having a maximum gross weight of 67,200 lbs in both highway and TOFC service. Legal maximum container weight is determined by regulations. The chassis meets DOT, AAR, TOFC, FMVSS, SAE, TTMA requirements and standards in effect at time of manufacture to operate in United States and Mexico.

### 2. Material

High strength low alloy steel with yield strength not less than 80,000 psi is used for the fabricated gooseneck beam, Slider frame rail. High strength low alloy steel with yield strength not less than 50,000 psi is used for hot rolled I-beam and other fabricated parts.

### 3. Overall Length

The overall length is 53'-9 3/4" (excluding rear bumper)

### 4. Overall Width

The overall width over bolster is 96"

### 5. King Pin Location

36" from the rear face of the front bolster

### 6. Tandem Location

Sliding suspension to allow tandem location of 74" thru 146" in 8" increment from the rear face of rear bolster.

### 7. Rear Bolster Height

48"±1" with the chassis level

### 8. Landing Gear Location

94" from the center of kingpin.

### 9. Tare Weight (Tolerance ±2%)

The chassis complete weight is approximately 7,450 lbs

### 10. Main Beams

12" deep x 4" wide x 16 lbs./ft (23.8kg/m) hot rolled I-section main beams, ASTM-A572 Grade 50. The main frame is 3-piece type bolted on together for the oversea transportation convenient.

### 11. Gooseneck Beams

4" deep x 4" wide x 1/2" flanges (80,000 psi) with 5/16" web fabricated H-beam.

120" from the rear face of the front bolster to the end of the gooseneck. 3-1/8" plus 0", minus 1/16" distance between the top of the main frame and the top of the gooseneck.

## 12. Cross Members

3/16" (4.5mm) thick x 2 1/2" wide x 9" height.

3/16" (4.5mm) thick x 3" wide x 5 1/4" height cross members with integrated triangular gussets over sliding bogie.

1/8" (3mm) fabricated Profiled bar type diagonal brace.

## 13. Upper Coupler Assembly

- a) 1/4" thick pick up plate will be installed with continuous welding along the entire perimeter.
- b) The King Pin is of 2" diameter "L" series or Cruciform series, S.A.E. standard J700B and certified per AAR. Forged steel alloy heat treated to surface hardness of Brinell 380 to 420.
- c) 2" diameter water drain hole.
- d) 1/4" thick fabricated wide channel type king pin supporter.
- e) 3/16" thick gooseneck crossmembers behind the pick up plate.

King pin supplier: Holland or JOST.

## 14. Front Bolster

7-3/8" wide x 7-3/4" high, 1/4" thick open section is fabricated by hi-tensile minimum Grade 50 steel, it's rear web shall be tapered forward at the top approximately 2-3/8" x 45 degrees to provide a container gather in a stevedoring operation. Front bolster provides full recessing of lights, air and electrical connectors, and the connectors will be located in roadside for easy operation.

Two 3/16" thick triangular wing plates are welded on each side between the main rail and front bolster to reinforce the bolster.

Front Bolster corner castings are provided at each end.

## 15. Front Locking Pins

The front locking pins are the Schulz FB99HL-JBH-LH/RH.

## 16. Rear Bolster

7 1/2" wide x 1/4" thick top plate with 6 4/5" wide x 8" deep x 3/16" thick "U" type bottom channel, assembly with cantilevered twist locks each end at 89" centers. 5/16" x 7/8" high light protector each side. The rear bolster will be bolted on the main frame for easy maintenance. Two reinforcement gussets are bolted between the main rail and rear bolster on each side.

## 17. Twist Locks

Rear twist locks are Schulz 905-177-000-45-LP-CS-JBH &

905-177-000-45-LP-RS-JBH.

## 18. DOT Bumper

Drop type meets DOT requirements. 3/16" x 4" x 4" square tube step guard with taper "H" section vertical member. Drop bumper to be 22" above ground and 94" long with recess for conspicuity treatment. The round corners are provided at each end of step guard for blow shedding capabilities. The bumper is bolted on the rear bolster.

## 19. Landing Gear

JOST A400.T18.17, 17" travel landing gear is used. 10 bolt, two speed vertical, tubular legs with low profile shoe and solid axle. Roadside crank handle.

## 20. Landing Gear Support Brackets

Landing gear boxes are fabricated of 1/4" thick grade 50 steel and bolted to the main frame with 5/8" grade 8 Hex head bolts. There are 1/4" thick stiffeners both inside and outside of the landing gear box. Min. 1/4" thick angle brace to support the landing gear. The landing leg is designed to bend or break before the landing leg bracket when a force occurs lengthwise to the chassis. 4" channel cross brace at 5 lbs/ft.

## 21. Tandem & Suspension

Holland Z frame ([ZFC02-1H000 series](#)), 4 - Pin spring loaded release with 2-leaf high arch 324-01 spring (11,000 lb. capacity each). Slider frame will be fabricated by CIMC under approval of supplier.

Four-pin slider with substantial positive end stops to prevent overextending the slider or separating tandem from chassis frame. The tandem sliding range assure that the forward slider setting allows the distance between the center line of the king pin and center line of the rear axle to be less than 40' (12.2m). The slider positioning holes in the main rail are reinforced on the outside with minimum 1/4" (6mm) thick doubler plates.

**Slider Handle:** The slider handle shall be located in front of the tandem axle and should be mounted in such a fashion to protect the slider handle from being damaged during normal operating requirements. The handle in the fully retracted position should extend beyond the chassis main rail by at least 4 inches. At no time during the operation of the slider handle should there be a close clearance between the handle and any other component of the chassis.

## 22. Axles

5" round axles with 25,000 lbs capacity, "N" spindle, 77-1/2" track.

16-1/2" x 7" FMSI 4515 Q Brake, Crest XL Linings, Stemco B-Lock brake shoe. Stemco Pro-Torq Nut P/N 447-4743.

Supplier: Saf-holland

## 23. Bearings

- A) Cone: HM218248 and HM212049 inner and outer cone.
  - B) Cup: HM218210 and HM212011 inner and outer cup.
- Supplier: Stemco.

## 24. Slack Adjusters

Stemco Crewson "Auto Check" 28 spline 6" automatic slack adjuster  
#MB72106S.

## 25. Seals

- A) Stemco Guardian HP Seal P/N 307-0743.
- B) Mobilith SHC 007 Synthetic Semi-Fluid Grease.
- C) Stemco Sentinel hub cap P/N 358-4009.

## 26. Hub and Drum

10-stud hub-piloted, 285.75mm bolt circle, cast steel hub completed with nuts for ferrous dual disc wheels with 220mm bore. 16 1/2" x 7" cast iron outboard mounted brake drums.

Maker: KIC lightweight hub and drum assembly.

## 27. Wheels

22.5 x 8.25, 10-Hole hub-piloted (color = white), 285.75mm Bolt Circle, 26mm bolt hole diameter, 220mm bore, 5 hand holes. Assembly with Standard valve TR572.

Maker: Accuride

## 28. Tires

11R22.5, 14 ply range (G) tubeless type without customer's logo.

Maker: GT Radial

## 29. Brake System

- a) WABCO 2S/1M ABS brake system is used.
- b) Two (2) Evolution tanks. (Capacity 1,488 cu-in each)
- c) Air line: color coded 3/8" for control line and 1/2" for supply line
- d) Brake chamber: TSE Omnibrake Model 3030TL3 30-30 long stroke brake chambers.
- e) Gladhand: Phillips 12-49064/084 cast steel gladhand.

## 30. Electrical System

- a) 12 volt lighting system with Phillips QCS2 wiring harness, for ABS system.

Electric harness will be made of three sections. Front section will extend

from 7-way receptacle and end just ahead of the upper coupler, A 12 gauge jumper will be installed. Middle section will extend from the upper coupler to the rear bolster. Rear section will provide leads for lights in the rear bolster. A waterproof plug will be used to connect front harness, middle harness and rear bolster harness. Middle harness will allow for enough extra harness at the rear to allow the plug connection to be stored inside the rear bolster to protect it from damage and moisture. Access to the plug connection must be accessible throughout the taillight hole. A minimum of 10 inches of excess harness will be provided ahead of the king pin area and retained inside the front bolster. Lead wires to ABS wheel sensors are to be covered by protective loom. SAE color code is used to identify wires.

- b) 4" Stop/Turn/Tail LED lamp: Optronics STL13RFMB.
- c) 3/4" Front marker/clearance LED lamp: Optronics MCL11SAKB
- d) 3/4" Mid marker LED lamp: Optronics MCL11SAKB
- e) 3/4" Rear marker/clearance LED lamp: Optronics MCL11SRKB
- f) 3/4" ID LED lamp: Optronics MCL11SRKB
- g) 3/4" ABS warning LED lamp: Optronics MCL11SAKB
- h) LED License lamp: Optronics LPL12CKMB
- i) Receptacle: [Phillips 16-7242, with solid pins](#)
- j) Reflector: Peterson 489A/R or similar type

4" LED lights will be connected to hard shell connectors with locking. The pigtail is combined into the license light and 3/4" LED clearance lights with male bullet connectors for harness connection.

4" LED lights will be mounted by stainless steel rivets.

Mounting of the stop and turn lights should be from inside the bolster to eliminate security ring and theft. Provide bolt on access panel to facilitate changing lights. Provide drawings prior to start of build.

### **31. Hubodometer**

Each unit shall be equipped with a Hubodometer, to be located on the roadside of rear axle hub.

Supplier: Stemco

### **32. Registration Holder**

The registration holder is to be mounted a minimum of 60" and a maximum of 72" back from the centerline of the landing gear with stainless steel rivets.

Registration cover is attached to the base with a cable.

Supplier: Optronics DH55Y.

### 33. Mud Flaps

24" x 24" "Anti-sail" rubber flap mounted on slider box, with etched UP Shield.  
No more than 8" ground clearance. Comply with DOT requirements.  
Maker: New life Transportation Parts

### 34. Painting

After surface preparation, surface will be coated with marine paint of the following specifications.

E-coat primer (minimum 20µm).

Supplier: PPG

Powder coating topcoat (minimum 60µm). Color UPRR Yellow.

Supplier: Valspar or PPG.

The frame painting has 7 years warranty.

The spring hanger pipes shall be internally sprayed after assembly with wax-based coating, color: black.

### 35. Marking

Complete Decal package installed by CIMC @ UP design to be furnished.

Decals warrant for seven (7) years minimum against peeling, cracking or fading. Decals will be made of durable vinyl material, using inks and adhesives recommended by the supplier of the vinyl material.

Marking diagram must be approved prior to start of build.

### 36. Conspicuity Tape

Installed per Federal regulations.

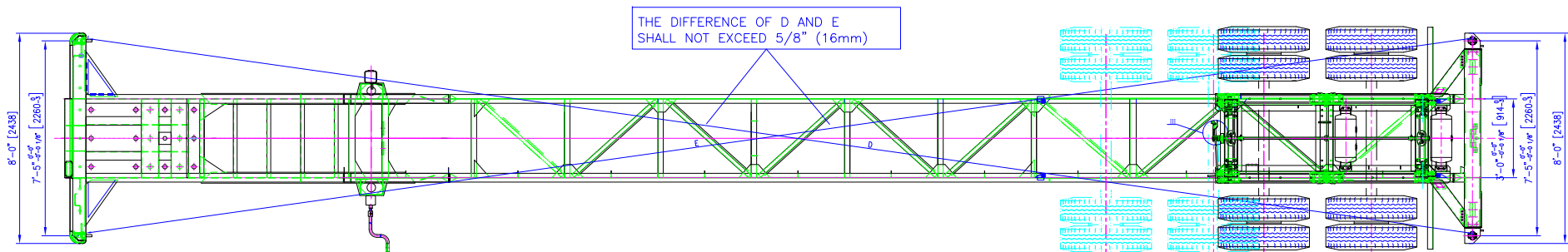
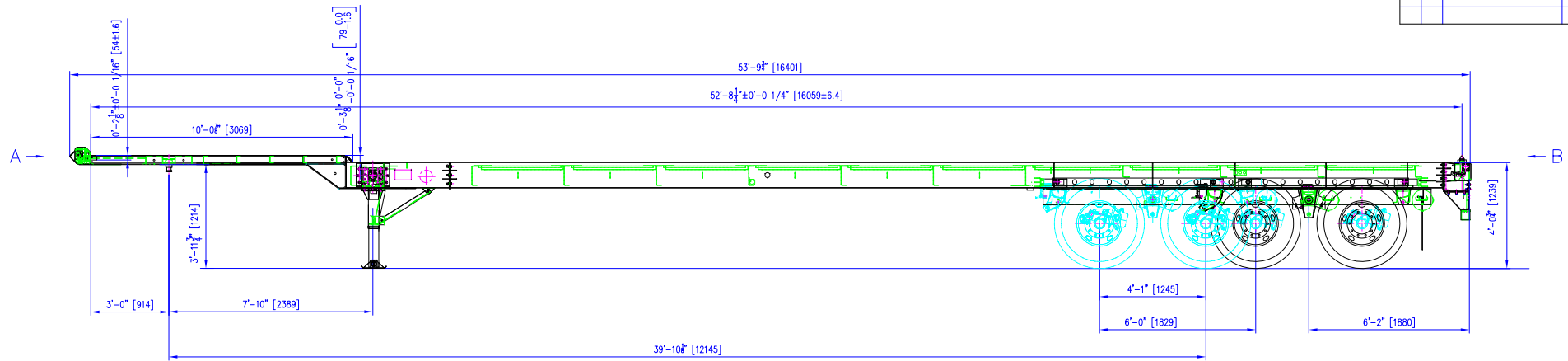
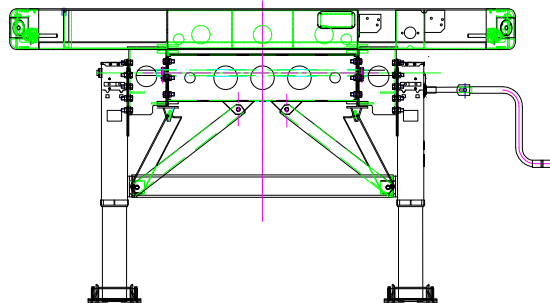
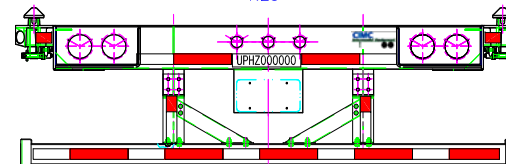
#### DISCLAIMER

Specifications are believed to be correct, but may contain errors and/or omissions. Photographs are the representative of the subject equipment but may not be identical.  
Equipment availability, prices and specifications are subject to change without notice.

Dwg No.:



SYM	QTY	CODE	SIGN	DATE

VIEW A  
1:25VIEW B  
1:25

CIMC CMC VEHICLES GROUP CO., LTD. - CVGC

Title: 53' Tandem Chassis

Drawn:		Mat'l:	Scale: 1:50
ENG. Check:		Wt(kg):	
PROC. Check:		Dwg No.:	
STD. Check:		Sheet 1 of 1	Revision:
Approved:			