



# CENTER FLOW® COVERED HOPPER CAR SPECIFICATION

**ESTIMATE NO.:** 13-ARI-007-A

**CUSTOMER:** ARI Standard

**CAR TYPE:** CF3258 Center Flow® Covered Hopper Car

**DATE:** 1/2/13

**COMMODITY:** Unknown

**SALES ARRANGMENT DWG.:** S5-W-7107

## GENERAL INFORMATION

Volume -----	3258 cu. ft
Number of Compartments -----	2
Length over Pulling Face -----	41' 11"
Truck Centers -----	28' 7-1/2"
Outlet Centers -----	12'
Height (Rail to Top Of Hatch) -----	15' 1"
Extreme Width Outside -----	10' 7-5/8"
Height – Rail to Extreme Width -----	8' 7"
Width – Upper Eaves (Running Boards) -----	8' 0"
Height – Rail to Upper Eaves -----	14' 9"
Clearance Diagram -----	C
Slope – Transverse Slope Sheet -----	45°
Slope – Side Slope Sheet -----	48°
Slope – End Floor Sheet -----	40°
Center of Gravity – Empty (estimate) -----	55"
Center of Gravity – Loaded (estimate) -----	98"
Carbody Weight (estimate) -----	33,500 lbs
Total Lightweight (estimate) -----	53,500 lbs

Remarks: Load limit is based on 286,000 lbs GRL per AAR S-286.

## NEGOTIABILITY:

Horizontal Curve Uncoupled -----	150'
Horizontal Curve Coupled to Like Car -----	140'
Horizontal Curve Coupled to AAR Base Car -----	153'
Vertical Curve Uncoupled -----	268'
Vertical Curve Coupled to AAR Base Car -----	385'

## EQUIPMENT

Hatches -----	(3) 30" diameter fiberglass covers with Ireco latches
Outlets -----	(2) Miner MKE 10183K, 13" x 42" gravity*
Vibrator Attachments -----	(4) per car, (2) per compartment- stud welded
Vents -----	(2) 2" end vents with rain covers, (1) on each end
Running Boards/End Platforms -----	Pre-galvanized, ARI G-90
Lift Holes -----	4" x 6" oval holes in side sill
Center Plate -----	Grade "B" 16" Low Profile Forged
Rear Lugs -----	Fabricated
Draft Gear -----	AAR M901E or M901G
Yoke -----	SY40AE Gr. "E" or integral
Coupler -----	SBE60EE, bottom shelf
Coupler Carrier Wear Plates -----	Non-metallic
Striker -----	Fabricated
AEI Tags -----	(2) per car
Defect Card Holder -----	None

Remarks: \*Applied w/ 64 bolts each & butyl caulk inside bolt circle. Specialties controlled by ARI.



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## CAR DESCRIPTION

### BODY MATERIAL

Side Sheet -----	.174" min 50 ksi yield
Side Slope Sheet -----	.240" min 36 ksi yield
Roof Sheet-----	.174" min 50 ksi yield
Side Plate -----	.121" min 50 ksi yield
End Floor Sheet -----	.209" min 50 ksi yield
Interior Bulkheads -----	.178" min 50 ksi yield
Interior Floor Sheet -----	.178" min 50 ksi yield
Outlet Mounting Frame -----	4" x 4" x 3/8" ASTM A-36

### UNDERFRAME MATERIAL

Stub Center Sill-----	Fabricated
Center Sill Web-----	1/2" ASTM A-572 Gr. 65 Ty. 2
Shear Plate -----	17/32" ASTM A-572 Gr. 50 Ty. 2
Diagonal Stiffeners -----	.240" min. 50,000 yield
End Sill -----	8" x 4" x 1/2" ASTM A-572 Gr. 50 Ty. 2
Bolster Bottom Cover -----	1/2" ASTM A-572 Gr. 65 Ty. 2
Upper Bolster Web -----	.240" min. ASTM A-572 Gr. 50 Ty. 2
Lower Bolster Web -----	1/2" ASTM A-572 Gr. 50 Ty. 2

## BRAKES

Brake -----	Body mounted 10" x 12" cylinder
Control Valve-----	ABDX or DB-60, aluminum
Empty Load Valve -----	End slope sheet mounted with tap
Slack Adjuster -----	Automatic-double jaw
Hand Brake-----	Vertical wheel Ty. 1993
Remarks: Specialties controlled by ARI.	

## TRUCKS

Type -----	286,000 lbs capacity, AAR M-976 compliant
Weight -----	20,000 lbs (total)
Spring Grouping-----	D5
Wheel -----	36" dia. Class "C", 1 wear
Axle -----	AAR M-101 Gr. "F", 6 1/2 x 9
Roller Bearing -----	Heavy duty 6 1/2 x 9, NFL type
Roller Bearing Adapter -----	Narrow pedestal with elastomeric pads
Roller Bearing Retainer Key -----	None
Side Frame -----	AAR M-201 Gr. "B+" *
Bolster -----	AAR M-201 Gr. "B+"
Bolster Wear Liner-----	Vertical: metallic - welded, Horizontal: non-metallic - loose
Center Plate Lubricant -----	None
Side Bearing -----	Constant contact, long travel, metal capped
Brake Shoe -----	AAR H4, 2" composition
Brake Beam -----	AAR #18 unit type
Brake Beam Guide-----	Non-metallic
Remarks: *Column guide wear plates are bolted only. Specialties controlled by ARI.	



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<b>PAIN T &amp; LINING</b>
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Interior Preparation -----	Abrasive blast or mechanically clean welds for inspection
Exterior Preparation -----	Abrasive blast to commercial grade SP-6
Interior Lining -----	None
Exterior Paint -----	DTM epoxy, gray, 4-6 mils DFT
Anti-Skid -----	ARI anti-slip
Stenciling -----	AAR markings with horizontal yellow delineators
Remarks:	

<b>MISCELLANEOUS</b>
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