

# APPLICATION GUIDE

## TRAILER MECHANICAL SUSPENSIONS



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## Introduction

This guide provides you with recommendations for on/off road use and other information necessary for the selection of a trailer mechanical suspension system.

For further recommendations and information on applications not covered in this guide, contact SAF-HOLLAND Trailer Suspension Application Engineering at 888.396.6501.

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## 1. Short Haul Applications

Short haul applications such as city pick-up, delivery and milk run pick-up's (typically 30 miles (50km) or less) result in a particularly harsh environment for the operation of tractor trailers. As a result, even though the particular application may meet all of the criteria of a category (e.g. "Standard Duty"), the next higher category will be required (e.g. "Moderate Duty").

## 2. Inner City Fuel Hauling

Inner city fuel haul applications result in a particularly harsh environment for the operation of tractor trailers. As a result, even though the particular application may meet all of the criteria of a category (e.g. "Standard Duty"), the Severe Duty On-Road category must be used.

## 3. Dump Trailers

### Axle Stops

Trailers used for dump applications must have axle stops installed on the rear axle. The load transfer to the rear axle during the dumping operation could transfer enough weight to the rear axle to exceed its load rating and potentially damage suspension components. Axle stops are not provided by SAF-HOLLAND, but are to be incorporated into the trailer design.

## 4. Low Boy Equipment Trailers

### Axle Stops

Trailers used for float/lowboy applications must have axle stops installed on the rear axle. The load transfer to the rear axle during the loading operation will transfer enough weight to the rear axle to exceed its load rating and potentially lessen its longevity. Axle stops are not provided by SAF-HOLLAND but are to be incorporated in the trailer design.

## 5. Severe Environments

Some areas of the country are particularly difficult on the operation of a trailer. This would include most logging roads, chip van environments, steep mountain or steep grades (e.g. 20% or greater) where the vehicle is subjected to extreme conditions. In these applications there are times where you must move up to the next capacity suspension. Please contact SAF-HOLLAND Trailer Suspension Application Engineering at 888.396.6501 for additional details.

SAF-HOLLAND offers the widest range of mechanical suspension models to the industry today.

From the well known workhorse UltraLite2 (Binkley) mechanical slider suspension system to the severe-duty vocational TR Series (Neway) with its robust 120,000 lb. maximum capacity, you can be sure that SAF-HOLLAND has a mechanical suspension to meet your trailer application requirements.

The introduction of SAF axles and brakes, including the innovative INTEGRAL™ disc brake technology provides you a complete suspension system with our on-highway models.

## MECHANICAL SLIDER SUSPENSIONS



### ULX40 MECHANICAL SLIDER SUSPENSION SYSTEM

- Applications: Dry Van and Reefer
- Up to 50,000 lb capacity
- 5-3/4" axle beam
- Standard SAF drum brake tapered spindle axle or optional parallel spindle axle
- Available with optional SAF INTEGRAL™ Disc Brake systems
- DuraSystem™ 10-Year Extended Warranty available
- QwikRelease™ pin pull release handle for easy and efficient adjustments
- Optional air release pin pull release handle system



### ULTRALITE SLIDER SUSPENSION

- Applications: Dry Van and Reefer
- Up to 50,000 lb capacity
- QwikRelease™ pin pull release handle for easy and efficient adjustments
- Optional air release pin pull release handle system
- DuraSystem™ 10-Year Extended Warranty available

## MECHANICAL CHASSIS SLIDER SUSPENSION



### Z-FRAME CHASSIS SUSPENSION

- Applications: Container Chassis and other I-Beam Frame Constructed Trailers requiring an inside slider
- Up to 50,000 lb capacity
- QwikRelease™ pin pull release handle for easy and efficient adjustments

## MECHANICAL FIXED FRAME SUSPENSION



### DURALITE SUSPENSION

- Applications: Platform, Bulk Tank, Container Chassis and Converter Dolly Trailers
- Up to 25,000 lb per axle capacity
- Available in 13.5" - 19.5" ride heights
- Multiple bracket mounting options available to meet most trailer applications
- Single, tandem and tridem axle configurations

For over 60 years SAF-HOLLAND has been a leader in the heavy-duty vocational suspension field.

Pioneered under the Neway flag, the legacy of these suspension models is well known and proven. They are built to thrive in the harshest environments under the most severe applications. Ranging from 36,000 to 120,000 lb. capacities, SAF-HOLLAND has the suspension solutions for your vocational trailer applications.

## MECHANICAL FIXED FRAME HEAVY VOCATIONAL SUSPENSIONS



### TS SERIES SUSPENSION

- Applications: Logging, End Dump, Pole, Oil Field Floats. Logging Dollies, Refuse and Waste Hauler Trailers
- 44,000 to 60,000 lb. capacity
- Trunnion clamp heights: 2-1/2", 4-1/2", 6-1/2", and 8-1/2".
- Optional straddle mount available



### USR SERIES SUSPENSION

- Applications: Lowboy, Dropdeck, Heavy-Duty Container Chassis, On/Off Highway Heavy Capital Equipment, Military, and Crane Hauler Trailers.
- 44,000 to 60,000 lb. capacity



### TR & TRM SERIES SUSPENSION

- Applications: Lowboy, Dropdeck, Heavy-Duty Container Chassis, On/Off Highway Heavy Capital Equipment, Military, and Crane Hauler Trailers.
- 75,000 to 120,000 lb. capacity

## Standard Duty

**Weight (GCW):** ..... Less than 95,000 lbs. (43,000 kg.)  
Gross Combination Weight (GCW)

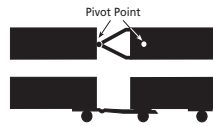
**Road Type:** ..... 100% On-Road (maintained concrete or asphalt roads)

**Trailer Type and Axle Limitation:**

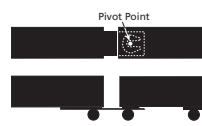
Single Trailer  
Tandem axle only



“A” Train—Maximum of 3 axles  
(Trailer and dolly converter)



“B” Train—Maximum of 3 axles  
(Lead and “pup” trailer)



**Note:** Any trailer used for “short haul” (e.g. city pickup and delivery) is to be considered “Moderate Duty”

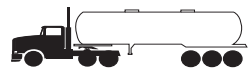
## Moderate Duty

**Weight (GCW):** ..... Less than 118,000 lbs. (53,500 kg.)  
Gross Combination Weight (GCW)

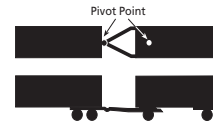
**Road Type:** ..... Less than 10% Off-Road (gravel or crushed rock roads) with balance On-Road  
(maintained concrete or asphalt roads)

**Trailer Type and Axle Limitation:**

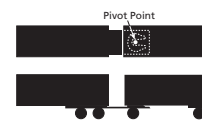
Single Trailer  
Tandem and Tri-axle only



“A” Train—Maximum of 4 axles  
(Trailer and dolly converter)



“B” Train—Maximum of 4 axles  
(Lead and “pup” trailer)



**Note:** Any trailer used for “short haul” (e.g. city pickup and delivery) is to be considered “Moderate Duty”

## Severe Duty - On-Road

**Weight (GCW):** ..... More than 118,000 lbs. (52,000 kg.)  
Gross Combination Weight (GCW)

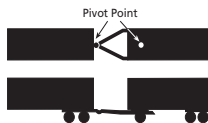
**Road Type:** ..... Less than 10% Off-Road (gravel, crushed rock, hard packed dirt, or  
unimproved / unmaintained roads)

**Trailer Type and Axle Limitation:**.....

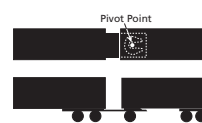
Single Trailer—No Axle Limitations



“A” Train—No Axle Limitations



“B” Train—No Axle Limitations



## Severe Duty - Off-Road

**Weight (GCW):** ..... More than 118,000 lbs. (52,000 kg.)  
Gross Combination Weight (GCW)

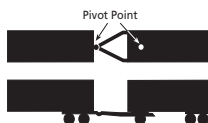
**Road Type:** ..... More than 10% Off-Road (gravel, crushed rock, hard packed dirt, or  
unimproved / unmaintained roads)

**Trailer Type and Axle Limitation:**.....

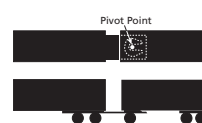
Single Trailer—No Axle Limitations



“A” Train—No Axle Limitations



“B” Train—No Axle Limitations



## Van Trailers

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)	SLIDER SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD
95,000 lb. Max. GCW Tandem Axle, General Freight, Line Haul, Reefer, Moving Van up to 2-Axle Train. Not for city pick-up and delivery <sup>(1)</sup>	TS-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)	ULX40 UltraLite	40,000 lb. (18,144 kg.)
	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)		

### Moderate Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)	SLIDER SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD
Less than 118,000 lb. GCW Tandem and Tri-Axle, General Freight, Line Haul, Reefer, Moving Van up to 2-Axle Train - For City Pick-up and Delivery.	TS-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)	ULX40 UltraLite	40,000 lb. (18,144 kg.)
	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)		

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Tandem, Tri-, and more than Tri-Axle, General Freight, Line Haul, Reefer, Moving Van up to 2-Axle Train, and 5 or more Axle B-Trains - On Road	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,600 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Tandem and Tri-Axle, General Freight, Line Haul, Reefer, Moving Van up to 2-Axle Train - Off Road	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,600 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) TS suspensions are available as tandem only.

(3) DuraLite suspensions are available as single, tandem and tridem configurations.

Capacity up to 25,000 lbs./axle with properly specified leaf springs, axle beams, and brakes and wheel ends.

**Note:** For A-Train applications see Suspensions for Converter Dollies on Page 16

**Note:** Refer to Page 6 for application limitations.

## Liquid and Dry Bulk Tankers

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
95,000 lb. Max. GCW Single and Tandem Axle Liquid and Dry Bulk Tanker - On Road. Not for city pick-up and delivery <sup>(1)</sup>	TS-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)
	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)

### Moderate Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
Less than 118,000 lb. GCW Single, Tandem, and Tri-axle Liquid and Dry Bulk Tanker - On Road. Not For City Pick-Up and Delivery <sup>(1)</sup>	TS-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)
	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single, Tandem, and Tri-axle Liquid and Dry Bulk Tanker - On Road - For City Pick-Up and Delivery	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,600 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single, Tandem, and Tri-axle Liquid and Dry Bulk Tanker - Off Road - For City Pick-Up and Delivery	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,600 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) TS suspensions are available as tandem only.

(3) DuraLite suspensions are available as single, tandem and tridem configurations.

Capacity up to 25,000 lbs./axle with properly specified leaf springs, axle beams, and brakes and wheel ends.

**Note:** For A-Train applications see Suspensions for Converter Dollies on Page 16

**Note:** Refer to Page 6 for application limitations.



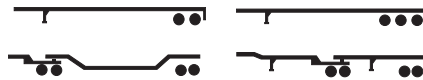
## Flat Deck, Container Chassis, Drop Deck, Stretch and Pole Trailers

### Standard Duty



	FIXED SUSPENSION		MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)	SLIDER SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD
95,000 lb. Max. GCW Single and Tandem Axle Trailers, Line Haul, Stake and Rack - On Road. Not For City Pick-Up and Delivery <sup>(1)</sup>	TS-4440 <sup>(2)</sup>	USR-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)	Z-Frame	40,000 lb. (18,144 kg.)
	TS-5500 <sup>(2)</sup> TR-8750 <sup>(3)</sup>	USR-5500 <sup>(2)</sup> DuraLite <sup>(4)</sup>	25,000 lb. (11,340 kg.)		

### Moderate Duty



	FIXED SUSPENSION		MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)	SLIDER SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD
Less than 118,000 lb. GCW Single, Tandem, and Tri-Axle Trailers, Line Haul, Stake and Rack - On Road. Not For City Pick-Up and Delivery <sup>(1)</sup>	TS-4440 <sup>(2)</sup>	USR-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)	Z-Frame	40,000 lb. (18,144 kg.)
	TS-5500 <sup>(2)</sup> TR-8750 <sup>(3)</sup>	USR-5500 <sup>(2)</sup> DuraLite <sup>(4)</sup>	25,000 lb. (11,340 kg.)		

### Severe Duty - On-Road



	FIXED SUSPENSION		MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single, Tandem, Tri-, and Quad-Axle Trailers, Line Haul, Stake and Rack - On Road - For City Pick-Up and Delivery	TS-5500 <sup>(2)</sup> TR-8750 <sup>(3)</sup> TR-4100 <sup>(3)</sup>	USR-5500 <sup>(2)</sup> DuraLite <sup>(4)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup> TR-8900 <sup>(3)</sup>	USR-5600 <sup>(2)</sup> TRM-4120 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION		MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single, Tandem, Tri-, and Quad-Axle Trailers, Line Haul, Stake and Rack - Off Road - For City Pick-Up and Delivery	TS-5500 <sup>(2)</sup> TR-8750 <sup>(3)</sup>	TR-4100 <sup>(3)</sup> USR-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup> TR-8900 <sup>(3)</sup>	USR-5600 <sup>(2)</sup> TRM-4120 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) TS and USR suspensions are available as tandem only.

(3) TR suspensions are available as tridem and quad only.

(4) DuraLite suspensions are available as single, tandem and tridem configurations.

Capacity up to 25,000 lbs./axle with properly specified leaf springs, axle beams, and brakes and wheel ends.

**Note:** For A-Train applications see Suspensions for Converter Dollies on Page 16

**Note:** Refer to Page 6 for application limitations.

## Logging Trailers

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
95,000 lb. Max. GCW Single and Tandem Axle Trailers - On Road. Not For City Pick-Up and Delivery <sup>(1)</sup>	DuraLite <sup>(2)</sup> TS-5500 <sup>(3)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

### Moderate Duty



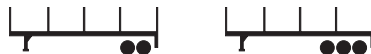
	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
Less than 118,000 lb. GCW Single, Tandem, and Tri-Axle Trailers - On Road. Not For City Pick-Up and Delivery <sup>(1)</sup>	DuraLite <sup>(2)</sup> TS-5500 <sup>(3)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single, Tandem, and Tri-Axle Trailers - On Road - For City Pick-Up and Delivery	TS-5500 <sup>(3)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single, Tandem, and Tri-Axle Trailers - Off Road - For City Pick-Up and Delivery	TS-5500 <sup>(3)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) DuraLite suspensions are available as single, tandem and tridem configurations.

Capacity up to 25,000 lbs./axle with properly specified leaf springs, axle beams, and brakes and wheel ends.

(3) TS suspensions are available as tandem only.

**Note:** For A-Train applications see Suspensions for Converter Dollies on Page 16

**Note:** Refer to Page 6 for application limitations.

## Dump (Framed) Trailers

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
95,000 lb. Max. GCW Tandem Axle Trailers - On Road. Not For City Pick-Up and Delivery <sup>(1)</sup> .	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Moderate Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
Less than 118,000 lb. GCW Tandem Axle Trailers - On Road. For City Pick-Up and Delivery.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Tandem Axle Trailers - On Road. For City Pick-Up and Delivery.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Tandem Axle Trailers - Off Road. For City Pick-Up and Delivery.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) TS suspensions are available as tandem only.

**Note:** Axle stops recommended on rearmost axle, refer to Page 3 for Axle Stop information.

**Note:** Refer to Page 6 for application limitations.

## Dump (Frameless) Trailers

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
95,000 lb. Max. GCW Tandem Axle Trailers - On Road. Not For City Pick-Up and Delivery. <sup>(1)</sup>	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Moderate Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
Less than 118,000 lb. GCW Tandem Axle Trailers - On Road. For City Pick-Up and Delivery.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Tandem Axle Trailers - On Road. For City Pick-Up and Delivery.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Tandem Axle Trailers - Off Road. For City Pick-Up and Delivery.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) TS suspensions are available as tandem only.

**Note:** Axle stops recommended on rearmost axle, refer to Page 3 for Axle Stop information.

**Note:** Refer to Page 6 for application limitations.

## Bottom Dump (Grain and Gravel) Trailers

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
95,000 lb. Max. GCW Single and Tandem Axle Bottom Dumps, Up To 3-Axle Trains - On Road. Not For City Pick-Up and Delivery <sup>(1)</sup> .	TS-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)
	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)

### Moderate Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
Less than 118,000 lb. GCW Single and Tandem Axle Bottom Dumps, Up To 4-Axle Trains, Tri-Axle Bottom Dumps - On Road. For City Pick-Up and Delivery.	TS-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)
	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Tandem Axle Bottom Dumps, Up To 4-Axle Trains, Tri-Axle Bottom Dumps - On Road. For City Pick-Up and Delivery.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Tandem Axle Bottom Dumps, Up To 4-Axle Trains, Tri-Axle Bottom Dumps - Off Road. For City Pick-Up and Delivery.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) TS suspensions are available as tandem only.

(3) DuraLite suspensions are available as single, tandem and tridem configurations.

Capacity up to 25,000 lbs./axle with properly specified leaf springs, axle beams, and brakes and wheel ends.

**Note:** Refer to Page 6 for application limitations.

## Rear Discharge (Wood Chip and Garbage) Trailers

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
95,000 lb. Max. GCW Single and Tandem Axle Bottom Dumps, Up To 3-Axle Trains - On Road. Not For City Pick-Up and Delivery <sup>(1)</sup> .	DuraLite <sup>(2)</sup> TS-5500 <sup>(3)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

### Moderate Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
Less than 118,000 lb. GCW Single, Tandem, and Tri-Axle Bottom Dumps, Up To 3-Axle Trains - On Road. For City Pick-Up and Delivery.	DuraLite <sup>(2)</sup> TS-5500 <sup>(3)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single and Tandem Axle Bottom Dumps, Up To 3-Axle Trains - On Road. For City Pick-Up and Delivery.	TS-5500 <sup>(3)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single and Tandem Axle Bottom Dumps, Up To 3-Axle Trains - Off Road. For City Pick-Up and Delivery.	TS-5500 <sup>(3)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(3)</sup>	30,000 lb. (13,608 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) DuraLite suspensions are available as single, tandem and tridem configurations.

Capacity up to 25,000 lbs./axle with properly specified leaf springs, axle beams, and brakes and wheel ends.

(3) TS suspensions are available as tandem only.

**Note:** Refer to Page 6 for application limitations.

## Lowboy Trailers

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
95,000 lb. Max. GCW Single, Tandem and Tri-Axle Trailers, Equipment Hauler Float - On Road. Not for city pick-up and delivery <sup>(1)</sup> .	USR-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)
	DuraLite <sup>(3)</sup> TR-8750 <sup>(4)</sup> USR-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TR-8900 <sup>(4)</sup> USR-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Moderate Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
Less than 118,000 lb. GCW Single, Tandem, Tri-, and Quad-Axle Trailers, Equipment Hauler Float - On Road. For City Pick-Up and Delivery	USR-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)
	DuraLite <sup>(3)</sup> TR-4100 <sup>(4)</sup> TR-8750 <sup>(4)</sup> USR-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TR-8900 <sup>(4)</sup> TRM-4120 <sup>(4)</sup> USR-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single, Tandem, Tri-, and Quad-Axle Trailers, Equipment Hauler Float - On Road. For City Pick-Up and Delivery	TR-4100 <sup>(4)</sup> TR-8750 <sup>(4)</sup> USR-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TR-8900 <sup>(4)</sup> TRM-4120 <sup>(4)</sup> USR-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Single, Tandem, Tri-, and Quad-Axle Trailers, Equipment Hauler Float - Off Road. For City Pick-Up and Delivery	TR-4100 <sup>(4)</sup> TR-8750 <sup>(4)</sup> USR-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TR-8900 <sup>(4)</sup> TRM-4120 <sup>(4)</sup> USR-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) USR suspensions are available as tandem only.

(3) DuraLite suspensions are available as single, tandem and tridem configurations.

Capacity up to 25,000 lbs./axle with properly specified leaf springs, axle beams, and brakes and wheel ends.

(4) TR & TRM suspensions are available as Tridem and Quad only.

**Note:** Axle stops recommended on rearmost axle, refer to Page 3 for Axle Stop information.

**Note:** Refer to Page 6 for application limitations.

## Converter Dollies

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD
95,000 lb. Max. GCW All Pup Trailers - On Road. Not for city pick-up and delivery <sup>(1)</sup>	DuraLite <sup>(2)</sup>	25,000 lb. (10,433 kg.)

### Moderate Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD
Less than 118,000 lb. GCW All Pup Trailers - On Road	DuraLite <sup>(2)</sup>	25,000 lb. (11,340 kg.)

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD
More than 118,000 lb. GCW All Pup Trailers - On-Road	DuraLite <sup>(2)</sup>	25,000 lb. (11,340 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) DuraLite suspensions are available as single, tandem and tridem configurations.

Capacity up to 25,000 lbs./axle with properly specified leaf springs, axle beams, and brakes and wheel ends.

**Note:** Refer to Page 6 for application limitations.



## Roll-On/Roll-Off

### Standard Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
95,000 lb. Max. GCW <sup>(1)</sup>	TS-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)
	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)

### Moderate Duty



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
Less than 118,000 lb. GCW	TS-4440 <sup>(2)</sup>	22,000 lb. (10,433 kg.)
	DuraLite <sup>(3)</sup> TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)

### Severe Duty - On-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Wood Chips - On-Road.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

### Severe Duty - Off-Road



	FIXED SUSPENSION	MAXIMUM SUSPENSION VERTICAL LOAD (PER AXLE)
More than 118,000 lb. GCW Wood Chips - Off-Road.	TS-5500 <sup>(2)</sup>	25,000 lb. (11,340 kg.)
	TS-5600 <sup>(2)</sup>	30,000 lb. (13,608 kg.)

(1) Applications in confined areas requiring sharp turns must move up to the next capacity suspension, e.g. city pick-up and delivery.

(2) TS suspensions are available as tandem only.

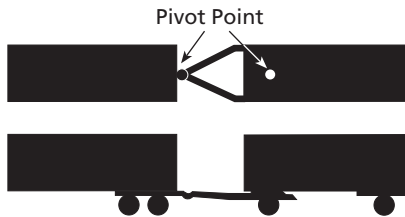
(3) DuraLite suspensions are available as single, tandem and tridem configurations.

Capacity up to 25,000 lbs./axle with properly specified leaf springs, axle beams, and brakes and wheel ends.

**Note:** Axle stops recommended on rearmost axle, refer to Page 3 for Axle Stop information.

**A-Train**

A combination of two or more trailers in which the dolly (converter or turntable) is connected by a single pintle hook or coupler, and the drawbar connection is at the center between each vehicle. The resulting connection has two pivot points (*Figure 1*).



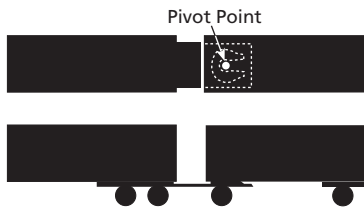
*Figure 1*

**Axles, Numbering**

When used in this guide to select a suspension, the number of axles (for example, "Up to 4-axle trains") refers to the total number of axles on the "towed vehicle(s)" or trailer(s). It does not include the axles on the towing vehicle.

**B-Train**

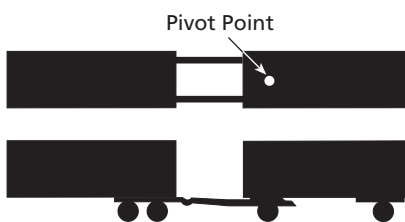
A combination of two or more trailers in which the rear semi-trailer(s) is connected with a single pivot point, commonly a fifth wheel, mounted on an extension of the frame of the lead trailer (*Figure 2*).



*Figure 2*

**C-Train**

A combination of two or more trailers in which the dolly (converter or turntable) is connected to the trailer by means of two pintle hook or coupler-drawbar connections. The resulting connection has one pivot point (*Figure 3*).



*Figure 3*

**Center-of-Gravity (c.g.)**

That point in a vehicle or body where the total weight or mass could be considered to be concentrated. Used in conjunction with vehicle stability and weight distribution on its axles.

**Converter Dolly**

An axle, frame, drawbar and fifth wheel arrangement that converts a semi-trailer into a full trailer.

**Full Trailer**

A trailer which does not transfer load to the towing vehicle. It employs a towbar coupled to a swiveling or steerable running gear assembly at the front of the trailer.

**Kompensator® Mounting Base**

A mounting base designed to relieve some of the torque and twist that is generated by some trailer designs, thereby reducing or eliminating trailer frame cracks. Tractor tandem tire life is also greatly increased due to improved traction. The primary application for a Kompensator® mounted fifth wheel is for tankers in which the c.g. does not exceed 44 inches above the top surface of the fifth wheel.

**Maximum Gross Combination Weight**

The maximum recommended capacity of a tractor/trailer combination, which is a sum of the weight of the towing vehicle, any towed vehicle(s) (empty weight) and the payload.

**Off-Road**

Refers to the terrain on which a tractor-trailer will operate which is unpaved and rough, or ungraded. Any terrain not considered part of the public highway system falls under this heading.

**On-Road**

Refers to the terrain on which a tractor-trailer will operate which is paved or a smooth graded surface, generally considered to be part of the public highway system.

**Rated Capacity**

The maximum, recommended safe load that can be sustained by a component or assembly without permanent damage.

**Roll Axis**

The theoretical line that joins the roll center of the front and rear axles.

**Roll Center**

The instant (always changing) center about which the vehicle sprung mass rotates when lateral (rollover) forces are applied. Generally this is located at the fore/aft center of the suspension at a height where the springs attach to the frame links.

**Semi-Trailer**

A load carrying vehicle equipped with one or more axles and constructed so that its front end is supported on the fifth wheel of the truck tractor which pulls it.

**Stability**

A relative measure of the handling characteristics which provide the desired and safe operation of the vehicle during various maneuvers.

**TVW (Towed Vehicle Weight)**

Total weight of towed vehicles.

**Torsional Rigidity**

A component's ability to remain rigid when subjected to twisting forces.

**Vertical Load Capacity**

The maximum, recommended vertical force (down) than can be safely applied to a coupling device.



From fifth wheel rebuild kits to suspension bushing repair kits, SAF-HOLLAND Original Parts are the same quality components used in the original component assembly. SAF-HOLLAND Original Parts are tested and designed to provide maximum performance and durability. Will-fits, look-alikes or, worse yet, counterfeit parts will only limit the performance potential and could possibly void SAF-HOLLAND's warranty.

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