TEREX®

# Operator's Manual

## HFT 70 RS

with
Maintenance
Information

First Edition
Second Printing
Part No. DCL00360

## Important

Read, understand and obey these safety rules and operating instructions before operating this trailer. Only trained and authorized personnel shall be permitted to operate this trailer. This manual should be considered a permanent part of your trailer and should remain with the trailer at all times. If you have any questions, call Terex Load King warranty service at 1-800-536-1800.

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♻ Printed on recycled paper

Printed in U.S.A.

# Introduction

## Owners, Users and Operators:

Terex appreciates your choice of our trailer for your application. Our number one priority is user safety, which is best achieved by our joint efforts. We feel that you make a major contribution to safety if you, as the trailer users and operators:

1 **Comply** with employer, job site and governmental rules.

2 **Read, understand and follow** the instructions in this and other manuals supplied with this trailer.

3 **Use good safe work practices** in a commonsense way.

4 **Only have trained/certified operators,** directed by informed and knowledgeable supervision, operating/towing the trailer.

If there is anything in this manual that is not clear or which you believe should be added, please contact us.

Internet: www.loadkingtrailers.com

E-mail: techpub@genieind.com



## Danger

Failure to obey the instructions and safety rules in this manual will result in death or serious injury.

## Do Not Operate Unless:

☑ You learn and practice the principles of safe trailer operation contained in this operator's manual.

**1 Avoid hazardous situations.**

**Know and understand the safety rules before going on to the next section.**

2 Always perform a pre-operation inspection.

3 Follow all operating and transport instructions.

4 Only use the trailer as it was intended.

☑ You read, understand and obey the manufacturer's instructions and safety rules—safety and operator's manuals and trailer decals.

☑ You read and understand the control functions contained in this manual.

☑ You read, understand and obey employer's safety rules and all applicable governmental regulations.

☑ You are properly trained to safely operate the trailer.

# Introduction

## Hazard Classification

Terex uses symbols, color coding and signal words to identify the following:



Safety alert symbol—used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

**⚠DANGER**
Red

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

**⚠WARNING**
Orange

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**⚠CAUTION**
Yellow

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

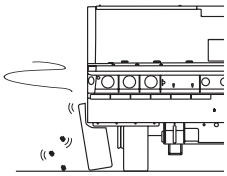
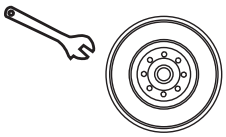
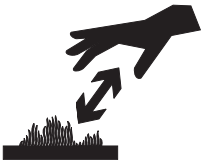
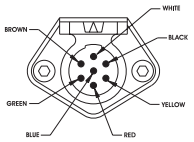
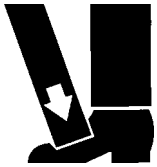
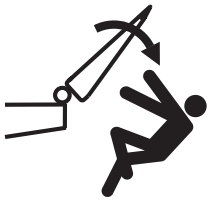
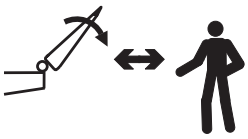
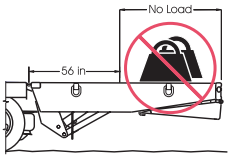
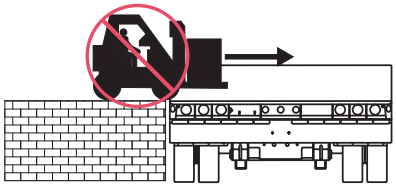
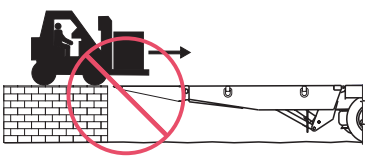
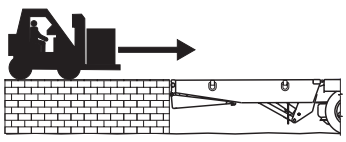
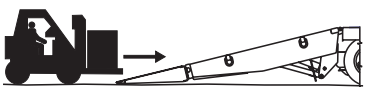
**NOTICE**
Blue

Indicates a hazardous situation which, if not avoided, could result in property damage.

## Safety Sign Maintenance

Replace any missing or damaged safety signs. Keep operator safety in mind at all times. Use mild soap and water to clean safety signs. Do not use solvent-based cleaners because they may damage the safety sign material.

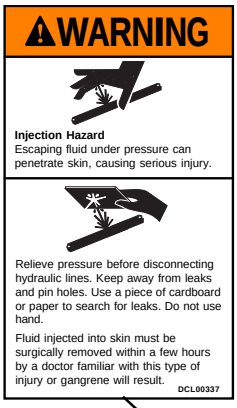
## Symbol and Hazard Pictorials Definitions

| | | | | |
|---|---|---|---|---|
|  Read the operator's manual. |  Do not weld. |  Loose wheels. |  Tighten wheel nuts |  Do not start engine |
|  Skin injection hazard |  Use a piece of cardboard or paper to search for leaks |  Burn hazard. |  Do not touch. Allow surface to cool. |   7-way plug wiring. |
|  Crushing hazard. |  Keep away from moving parts |  Crushing hazard (landing gear) |  Keep clear of landing gear |  Crushing hazard |
|  Keep clear of moving tail. |  Crushing hazard. |   Do not load area |  No side loading | |
|  Do not load or unload from a ramp with flip tail extended |  Always load from the back. Load from a ramp with flip tail folded. |  Load or unload with flip tail fully extended and resting frimly on the ground. | | |

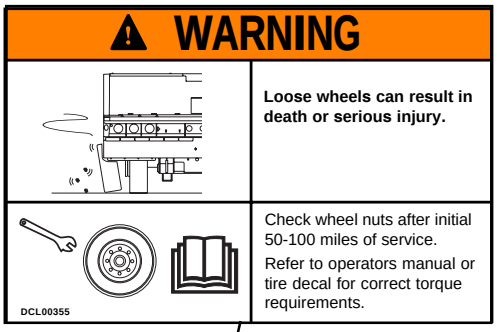
# General Safety

## Safety signs and locations

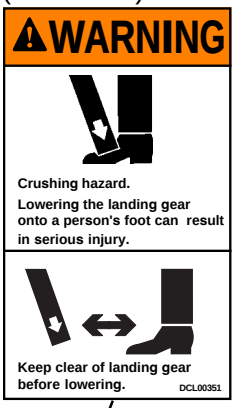
DCL00337



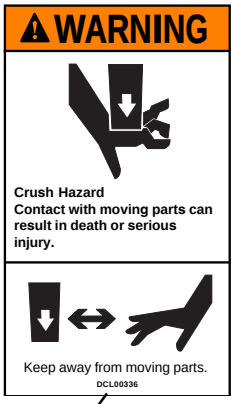

DCL00355

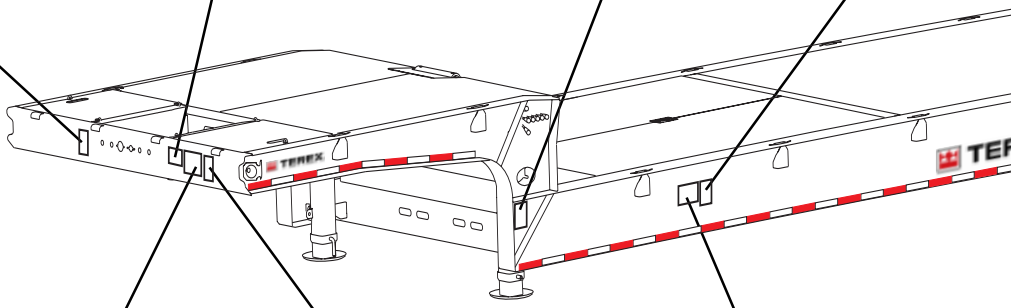


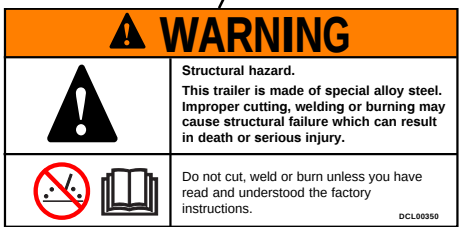

DCL00351
(both sides)



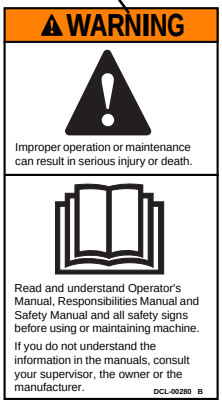

DCL00336
(both sides)






DCL00350




DCL00280




DCL00335
(both sides)

## General Safety

DCL00337
(both sides)

**⚠WARNING**



**Injection Hazard**
Escaping fluid under pressure can penetrate skin, causing serious injury.



Relieve pressure before disconnecting hydraulic lines. Keep away from leaks and pin holes. Use a piece of cardboard or paper to search for leaks. Do not use hand.

Fluid injected into skin must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene will result.

DCL00337

DCL00336
(both sides)

**⚠WARNING**



**Crush Hazard**
**Contact with moving parts can result in death or serious injury.**



Keep away from moving parts.

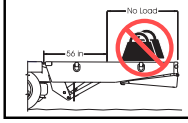
DCL00336

DCL00352
(both sides)

**⚠ WARNING**

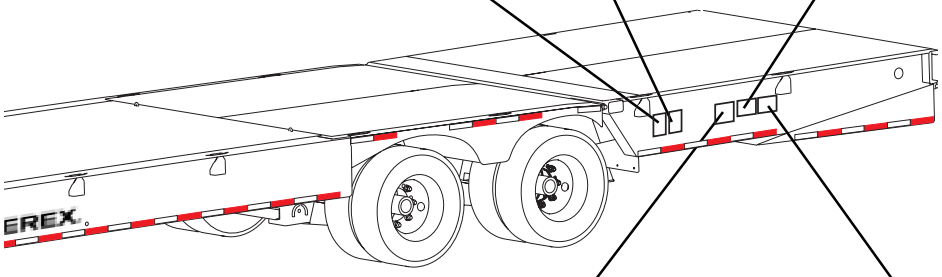


**Crushing hazard.**
Lifting or traveling with load on tail in the "NO LOAD" area may cause structural failure which can result in death or serious injury




Do not lift or travel with load in the "NO LOAD" area

DCL00352




DCL00357
(both sides)

**⚠ WARNING**



**Crushing hazard.**
**Contact with moving tail can result in death or serious injury.**

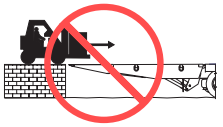


Keep clear of moving tail.

DCL00357

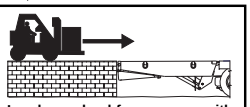
DCL00368
(both sides)

**⚠WARNING**

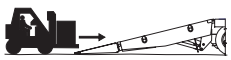


**Structural hazard.**
**Do not load or unload from a ramp with the fliptail extended. Loading or unloding from a ramp with fliptail extended may cause structural failure resulting in death or serious injury.**

DCL00368 A



**Load or unload from a ramp with the flip tail folded.**



**Load or unload from the ground with the fliptail fully extended and resting firmly on the ground.**



**Read the operator's manual for correct loading procedure.**

## Personal Safety

Operators must comply with employer, job site and governmental rules regarding the use of personal protective equipment.

# Trailer Operation Safety

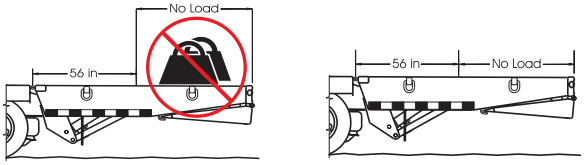
## ⚠ Crushing Hazards

Keep hands and feet out of moving parts.

Keep clear of the landing gear before lowering.

Keep clear of moving tail.

Do not lift or travel with the load in the “No Load” area.




## ⚠ Collision Hazards

Be sure to look overhead before loading. Make sure that the equipment is clear of overhangs, power lines and other obstructions.

Do not operate the trailer with a hydraulic oil or air leak. An air leak or hydraulic leak in the brake or suspension systems could result in a collision.

## ⚠ Structural Damage and Fire Hazard

This trailer is made of special alloy steel. Improper cutting, welding or burning may cause structural failure which can result in death or serious injury.

Do not cut, weld or burn unless you have read and understood the factory instructions.

## ⚠ Electrocution Hazard

This trailer and the equipment loaded on the trailer is not electrically insulated and will not provide protection from contact with or proximity to electrical current.

Maintain safe distances from electrical power lines and apparatus in accordance with applicable governmental regulations and the following chart.

| Line Voltage | Required Clearance | |
|---|---|---|
| 0 to 50KV | 10 ft | 3.05 m |
| 50KV to 200KV | 15 ft | 4.60 m |
| 200KV to 350KV | 20 ft | 6.10 m |
| 350KV to 500KV | 25 ft | 7.62 m |
| 500KV to 750KV | 35 ft | 10.67 m |
| 750KV to 1000KV | 45 ft | 13.72 m |

Keep away from the trailer and the equipment on the trailer if it contacts energized power lines. Personnel in the area must not touch or operate the trailer until the energized power lines are shut off.

## ⚠ Bodily Injury Hazard

Do not operate the trailer with a hydraulic oil or air leak. An air leak or hydraulic leak can penetrate or burn skin.

# Trailer Operation Safety

## ⚠ Loading and Unloading

Make sure that the dimensions of the equipment comply with all local and state highway standards.

Make sure that the equipment weight can be safely loaded and supported by the towing vehicle.

Make sure that weight is distributed properly and loads are properly secured before transport.

| **Maximum Load Capacity** | | |
|---|---|---|
| Trailer net structural capacity (Evenly distributed along the length of the trailer load bearing areas) | 70,000 lbs | 31752 kg |
| Trailer structural capacity, (Distributed on 10 ft concentration) | 50,000 lbs | 22680 lbs |
| Platform, folding tail retracted on highway limit | 20,000 lbs | 9072 kg |
| Winch | | |
| Standard 60 ft x 0.5 in / 18.3 m x 12.7 mm cable | 12,000 lbs | 5443 kg |
| Option 100 ft x 0.56 in / 30.5 m x 14.3 mm cable | 20,000 lbs | 9072 kg |
| Gooseneck ramp, raised | 20,000 lbs | 9072 kg |
| Gooseneck deck | 20,000 lbs | 9072 kg |

Note: The driver/operator is ultimately responsible for keeping the trailer within the Gross Vehicle Weight rating and Gross Axle Weight rating. Refer to the Vehicle Identification Number (VIN) decal on the gooseneck (roadside).

Do not raise or lower a load on the gooseneck ramp.

Be aware of the basic functions of the equipment to be loaded onto the trailer. Only trained equipment operators should load and unload the equipment onto the trailer.

Be sure that the landing gear shoes or foot pads rest on a hard ground surface. Place shoes on a support plank to prevent the landing gears from sinking into the ground surface.

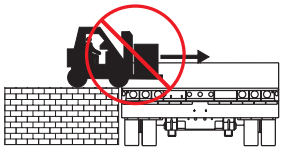
Be sure that the landing gear is fully retracted before moving the trailer.

Use chocks or blocks to secure the wheels of the transport vehicle and the trailer before loading or unloading.

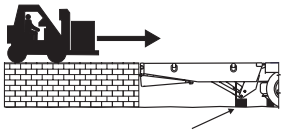
Make sure that the trailer bed and ramps are clean and free of oil, grease, ice snow or mud. Traction may be reduced during loading or unloading. Be aware of and avoid other conditions that may reduce traction and cause loss of control.

Put the equipment in the stowed position before loading. Follow the equipment manufacturer's loading recommendations.

Always load from level ground.



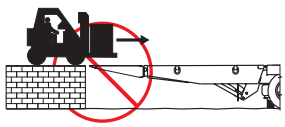
Do not load or unload from the side of the trailer.



Always load or unload from the tail end of the trailer.

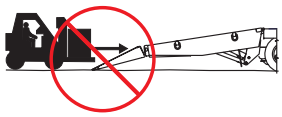
block frame

Note: The maximum load that can be driven or placed on the platform is 20000 lbs / 9072 kg. The maximum load that can be driven on the platform increases to 30,000 lbs / 13608 kg if the frame is blocked or supported.

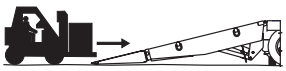


Do not load or unload from a ramp with the flip tail extended.

## Trailer Operation Safety



Do not load or unload from the ground with the flip tail not fully extended.

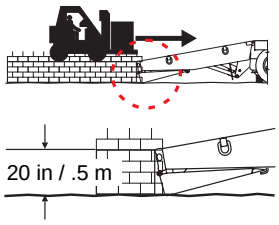


Make sure that the flip tail is fully extended and resting firmly on level ground.

Note: The maximum load that can be driven up the ramp is 30,000 lbs / 13608 kg on a single axle.



Do not load from level ground with the flip tail folded.




To load with the flip tail folded, make sure that the rear platform is resting firmly on the ground and a loading ramp equal to the height of the rear edge of the platform (20 in / 0.5m) is used.

Secure the cargo and any attachments to the bed of the trailer using transport rated chains, straps, and load binding equipment. Refer to the equipment owner's manual to identify the tie-down points.

Follow the equipment manufacturer's recommendations for shut-down procedures and securing the cargo to the trailer bed.

Make sure that the tie-downs don't pinch, crimp or cut any hoses, cylinders, valves, rods or tires.

Before unloading the equipment, look for any damage that could have occurred during transit. Check for broken, missing or damaged parts. Check the tires for cuts or bulges. Check the hydraulic system and hoses for leaks or cuts.

### ⚠ Transport Hazard

Read, understand and obey all of your tow vehicle manufacturer's recommendations, warnings and instructions before towing the trailer.

Make sure that the truck or tow vehicle has a road emergency kit on board.

Always slow down for curves, wet roads and down grades.

Never drive when you are fatigued. Pull over and rest if you are tired.

Avoid driving at night. The potential for over-the-road accidents is three times greater at night than during the day.

Do not attempt to pass on hills or curves.

Be alert to crosswinds or wind gusts.

Do a visual inspection of the truck and trailer while on a fuel or food stop.

Check the wheels for loosened nuts. Loose wheels can result in death or serious injury.

If you hear unusual noises or smell something burning while in transit, stop at a safe location completely off the highway and perform a visual inspection.

If a flat tire occurs, proceed slowly and stop at the nearest safe location off the road. Use flashers and flares.

Note: Proceed slowly. The road friction could ignite the flat tire and start a fire.

# Trailer Operation Safety

## ⚠ Cold Weather Operation

Be alert for indications of cold weather effects on the trailer. Cold weather causes lubricants to thicken. Insulation and rubber parts may harden and fabricated parts can become brittle. These trends may lead to problems found in bearings, electrical systems, air systems, hydraulic systems and weldments. Moisture attracted by warm parts due to usage can condense, collect and freeze to immobilize equipment.

Do not use the service or the parking brakes during any stop of an extended period. Use wheel chocks to secure the vehicle from moving.

Check all structural fastenings, air system fittings, gaskets, seals and bearings for looseness that may develop due to contraction in cold weather conditions. Do not over-tighten.

Check tire inflation. Tire inflation will decrease when the temperature drops. Refer to the VIN decal located on the roadside gooseneck for the cold tire inflation specification.

Allow hydraulic systems to warm up before putting systems into operation.

Periodically, check the drain holes in the bottom of the relay valves and storage compartment. Make sure the drain holes are open to avoid moisture entrapment.

## ⚠ Hot Weather Operation

Be alert for indications of hot weather effects on the trailer. Expansion of parts during hot weather may result in tightening of bearings, fasteners and moving parts. Gaskets and seals may also fail.

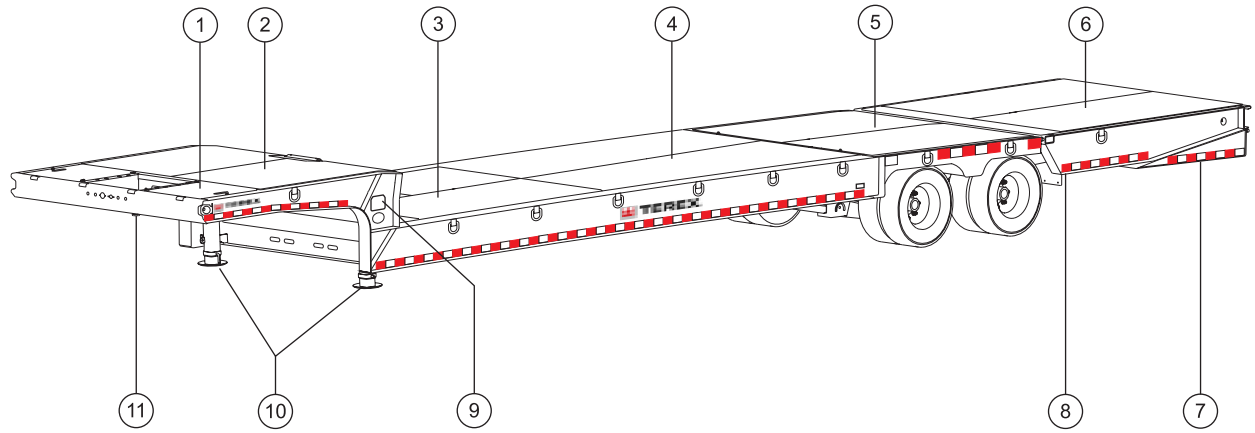
Park the trailer in the shade if possible. Long exposure to the sun will shorten the service life of rubber components (i.e. tires, grommets, hoses) and paint.

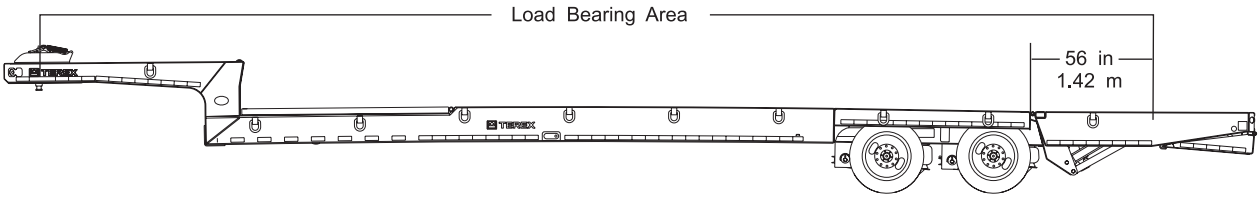
Check the tire pressure before beginning operation.

In extremely humid conditions, protect electrical terminals with ignition insulation spray. Coat painted exteriors and bare metal surfaces with an appropriate protective sealer.

It is recommended that a filler-lubricator is used in the tow vehicle’s air-delivery system.

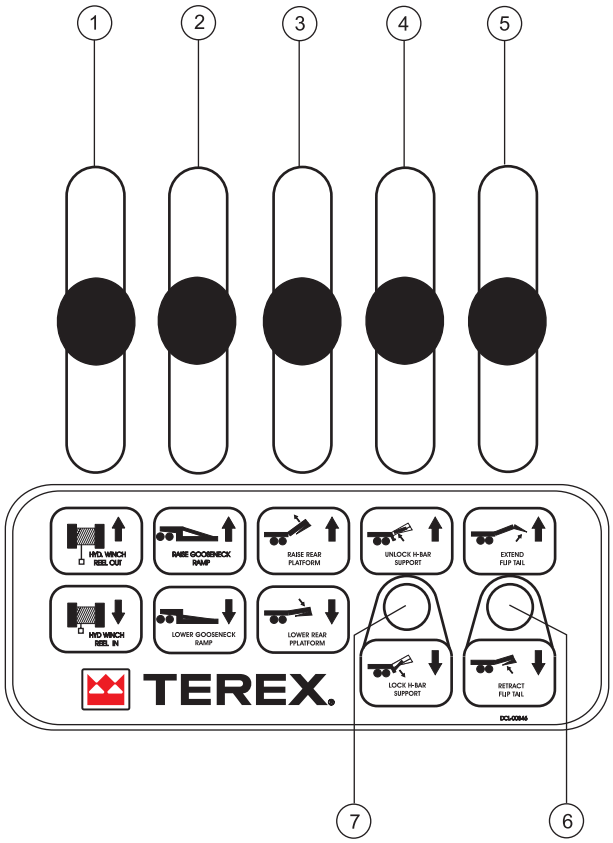
# Legend




1 Document storage box
2 Gooseneck
3 Gooseneck ramp
4 Main deck
5 Subframe deck
6 Platform
7 Flip tail ramp
8 Ramp support
9 Hydraulic controls
10 Landing gear
11 King pin

# Control Functions




**Control Panel**

1 Hydraulic winch control lever

Move the lever up to unwind the reel out of the cable. Move the lever down to wind up or reel in the cable.

2 Gooseneck ramp control lever

Move the lever up to raise the gooseneck ramp. Move the lever down to lower the gooseneck.

3 Platform ramp control lever

Move the lever up to raise the platform. Move the lever down to lower the platform.

4 Ramp support control lever

Move the lever up to to unlock the ramp support. Move the lever down to lock the ramp support.

5 Flip tail control lever

Move the lever up to to extend the flip tail. Move the lever down to retract the flip tail under the platform.

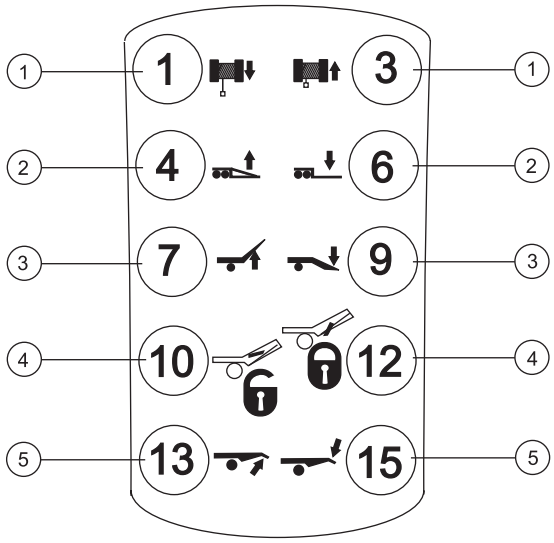
6 Flip tail indicator light

Light on indicates the flip tail ramp is fully retracted and the ramp support (H-bar) is in the proper position to allow the platform ramp to be lowered. The light will go off when the ramp support is raised.

7 Platform Ramp indicator light

Light on indicates the platform ramp is fully lowered and in the proper position for transport. Light will turn off when the ramp is raised.

# Control Functions




**Remote Control Panel (Optional)**

1 Hydraulic winch control buttons

Press the number 1 button to unwind or reel out the cable. Press the number 3 button to wind up or reel in the cable.

2 Gooseneck ramp control buttons

Press the number 4 button to raise the gooseneck ramp. Press the number 6 button to lower gooseneck ramp.

3 Platform ramp control buttons

Press the number 7 button to raise the platform ramp. Press the number 9 button to lower the platform ramp.

4 Ramp support control buttons

Press the number 10 button to move and unlock the ramp support. Press the number 12 button to to move the ramp support to the locked position.

5 Flip tail control button

Press the number 13 button to extend the flip tail. Press the number 15 button to retract and fold the flip tail under the platform.

# Inspections



## Do Not Operate Unless:

☑ You learn and practice the principles of safe trailer operation contained in this operator's manual.

1 Avoid hazardous situations.

**2 Always perform a pre-operation inspection.**

**Know and understand the pre-operation inspection before going on to the next section.**

3 Follow all operating and transport instructions.

4 Only use the trailer as it was intended.

## Pre-operation Inspection Fundamentals

It is the responsibility of the operator to perform a pre-operation inspection and routine maintenance.

The pre-operation inspection is a visual inspection performed by the operator daily. The inspection is designed to discover if anything is apparently wrong with a trailer before operating or towing the trailer.

The pre-operation inspection also serves to determine if routine maintenance procedures are required. Only routine maintenance items specified in this manual may be performed by the operator.

Refer to the list on the next page and check each of the items.

If damage or any unauthorized variation from factory delivered condition is discovered, the trailer must be tagged and removed from service.

Repairs to the trailer may only be made by a qualified service technician, according to the manufacturer's specifications. After repairs are completed, the operator must perform a pre-operation inspection again before operating or towing the trailer.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications.

# Inspections

## Pre-operation Inspection

- ❏ Be sure that the operator's manual is complete, legible and in the document storage container located inside the roadside (left) gooseneck tool box.
- ❏ Be sure that all decals and conspicuity tape are legible and in place. See Inspections section.
- ❏ Be sure the trailer bed and ramps are clean and free of standing water.
- ❏ Check for hydraulic oil leaks and proper oil level. Add oil if needed. See Maintenance section.
- ❏ Check for cracks in the axle. If cracks are found, do not repair but replace the axle immediately.
- ❏ Check for tire inflation. Inflate to the recommended pressure per the tire specification decal.

Check the following components or areas for damage, improperly installed or missing parts and unauthorized modifications:

- ❏ Electrical components, wiring and electrical cables
- ❏ Lights and reflectors
- ❏ Hydraulic hoses, fittings, cylinders and manifolds
- ❏ Wear pads
- ❏ Attachment points (D-rings)
- ❏ Tires and wheels
- ❏ Nuts, bolts and other fasteners
- ❏ Air leaks and chafing of air hoses
- ❏ Brake release components

Check entire trailer for:

- ❏ Cracks in welds or structural components
- ❏ Dents or damage to trailer
- ❏ Excessive rust, corrosion or oxidation

- ❏ Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.

# Inspections

## Inspection for Decals

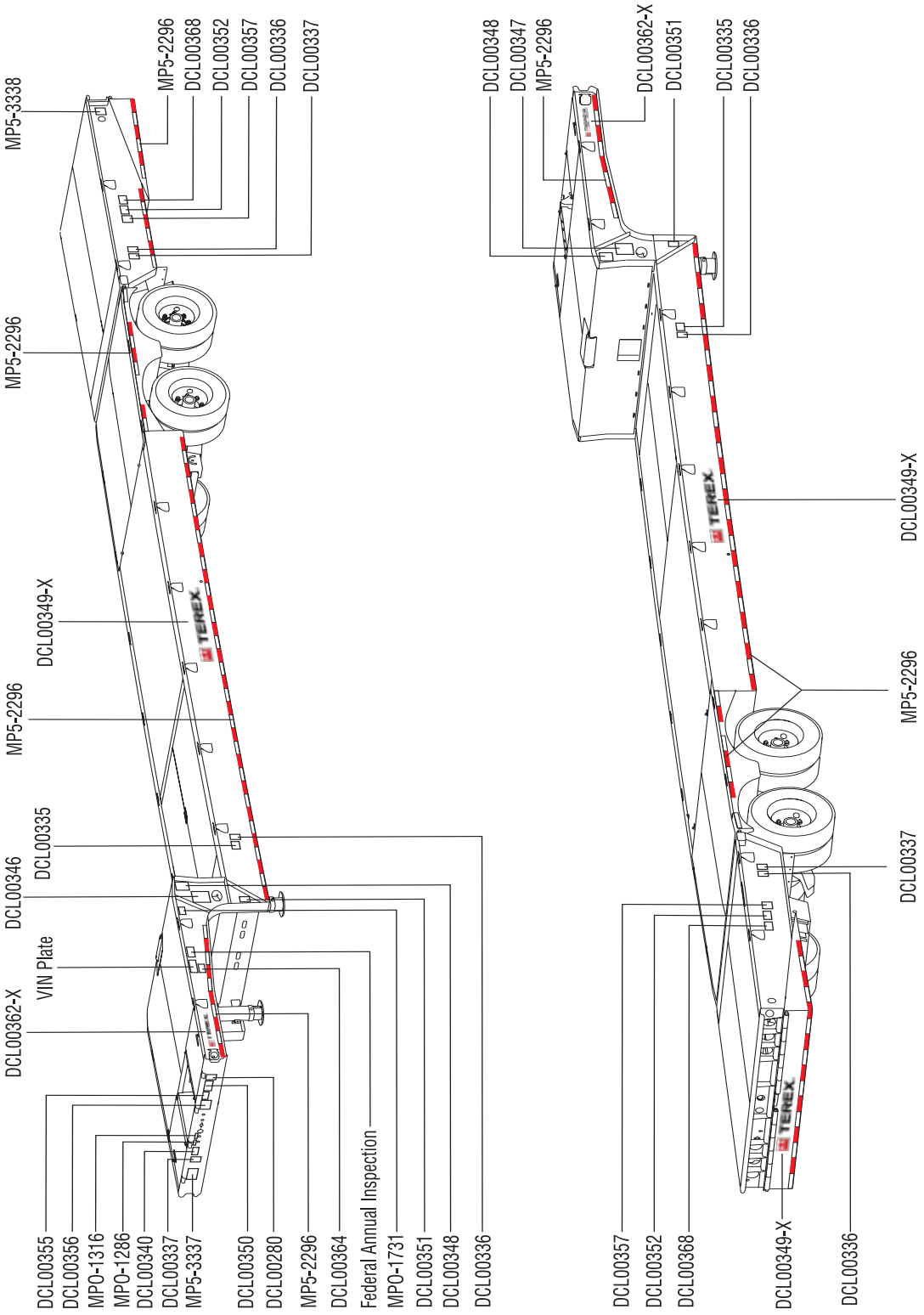
Use the picture on the next page to verify that all decals are legible and in place.

Below is a numerical list with quantitites and description.

| Part No. | Description | Quantity |
|---|---|---|
| DCL00280 | Warning - Read the Manual | 1 |
| DCL00335 | Warning - No Side Loading | 2 |
| DCL00336 | Warning - Hand Crushing | 4 |
| DCL00337 | Warning - Skin Injection | 3 |
| DCL00338 | Warning - Burn Hazard (engine option-not shown) | 1 |
| DCL00339 | Notice - Equipment Damage (engine option-not shown) | 1 |
| DCL00340 | Instructions - Operating Flow | 1 |
| DCL00346 | Hydraulic Controls, Road Side | 1 |
| DCL00347 | Hydraulic Control, Curb Side (if equiped with dual controls) | 1 |
| DCL00348 | Instructions - Hydraulic Flip Tail Operation (2 if equipped with dual controls) | 1 |
| DCL00350 | Warning - No welding | 1 |
| DCL00351 | Warning - Foot Crushing Hazard | 2 |

| Part No. | Description | Quantity |
|---|---|---|
| DCL00352 | Warning - Do not Lift or Travel | 2 |
| DCL00355 | Warning - Check Wheel Nuts | 1 |
| DCL00356 | Intructions - Wiring, 7-Way Plug | 1 |
| DCL00357 | Warning - Crushing Hazard, Moving Flip Tail | 2 |
| DCL00364 | Instructions - Maximum Capacity | 1 |
| DCL00368 | Warning - Loading with Fliptail | 2 |
| MP5-2296 | Conspicuity Tape | - |
| MP5-3337 | Label - ABS-Trailer Equipped | 1 |
| MP5-3338 | Label - ABS Malfunction Light | 2 |
| MPO-1286 | Label - Return | 1 |
| MPO-1316 | Label - Powerfold | 1 |
| MPO-1731 | Label - Exhaust/Normal | 1 |
| DCL00362-X | Cosmetic -Terex, Small | 2 |
| DCL00349-X | Cosmetic -Terex, Big | 3 |

# Inspections



# Operating Instructions



## Do Not Operate Unless:

☑ You learn and practice the principles of safe trailer operation contained in this operator's manual.

1 Avoid hazardous situations.

2 Always perform a pre-operation inspection.

3 Follow all operating and transport instructions.

**4 Only use the trailer as it was intended.**

## Fundamentals

The Operating Instructions section provides instructions for each aspect of trailer operation. It is the operator's responsibility to follow all the safety rules and instructions in the operator's manual.

Using the trailer for anything other than transporting the load to its destination is unsafe and dangerous.

Only trained and authorized personnel should be permitted to operate or tow the trailer. If more than one operator is expected to use the trailer at different times in the same work shift, they must all be qualified operators and are all expected to follow all safety rules and instructions in the operator's manuals. That means every new operator should perform a pre-operation inspection and a trailer inspection before using the trailer.

# Operating Instructions

## Landing Gear Operation

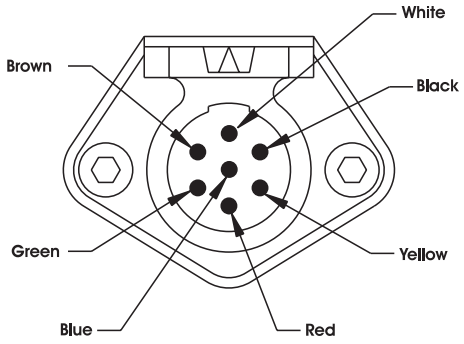
1 Push the crank in for high gear or pull the crank out for low gear.

2 To extend the landing gear, rotate the crank counterclockwise.

3 To retract the landing gear, rotate the crank clockwise.

## Electrical Systems

Attach the trailer to the towing truck as described below:




White - Ground
Black - Center identification, side clearance and licence
Yellow - Left turn and flasher
Red - Stop
Brown - Tail and rear clearance
Green - Right turn and flasher
Blue - Anti-lock brakes
(This wire is dedicated to anti-lock brakes and is not to be used for any other purposes.)

## Hydraulic Systems

The power supply for the hydraulic systems on this trailer can come from the towing vehicle (wet kit) or can be self-contained (engine option). This trailer operates at 10-15 gpm at 2500 psi / 38-57 lpm at 17,237 Kpa.

1 Attach the quick coupler connector from the hydraulic power supply unit to the trailer.

2 Start the engine.

Note: The relief setting for each particular trailer is set at the Terex factory. Adjusting the relief setting higher than the recommended setting will cause damage to the control valve and the cylinders and will void the warranty on the unit.

## Loading and Unloading

1 Using the platform ramp control lever, raise the platform ramp to the full up position. The ramp support lock will disengage.

2 Move the ramp control lever up to move and unlock the ramp support.

3 Move the flip tail control lever up to fully extend the flip tail.

4 Move the platform ramp control lever up or down to the desired height for loading and unloading.

# Operating Instructions

### Return Ramp to Transport Position

1 Using the platform ramp control lever, raise the platform ramp to the full up position.

2 Move the flip tail control lever down to retract the flip tail.

3 Fully lower the ramp support (H-bar) to the locked position.

Note: The flip tail indicator light will turn on to indicate that the flip tail is in the proper position for transporting.

4 Lower the platform ramp as far as it will go.

Note: The ramp support indicator light will turn on to indicate that the ramp support is in the proper position for transporting.

### Winch Operation

1 Move the control lever up to unwind or reel out the cable.

2 Move the control lever down to wind up or reel in the cable.

Note: The maximum winch line pull on a standard trailer is 12,000 lbs / 5443 kg. A maximum winch line pull of 20,000 lbs / 9072 kg is offered as an option.

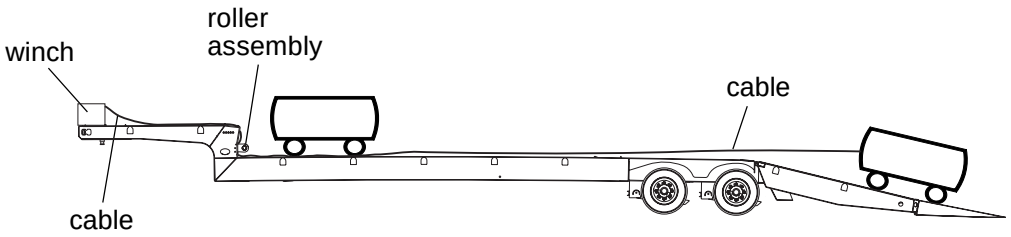
### Work Around Roller (if equipped)

The work around option allows the use of the winch to safely pull equipment onto the trailer when other equipment is already on the trailer. The cable is run under the equipment already on the trailer.

1 Route the cable from the winch through the pulley and under the equipment already loaded to the trailer.

2 Secure the equipment to the cable.

3 Load the equipment to the tailer using the winch function.



## Ridewell's Height and Leveling Control Valve

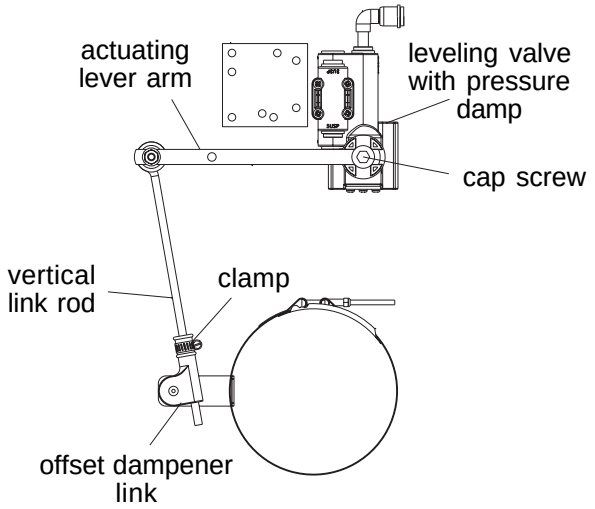
As load is applied, the actuating lever arm moves from its neutral position to the up (intake) position. This opens another part of the valve and air is allowed to exhaust from the air springs, bringing the actuating lever back to neutral position. To achieve optimum performance, the valve must be adjusted accurately to the suspension by increasing or decreasing the horizontal lever arm length where the valve and the lever arm approach a maximum of 45° up or down from the neutral position.

**Setting Up the Valve**

1 Insert the vertical link rod through the offset dampener link. Do not tighten the clamp until step 5 in ***How to Adjust Valve*** is completed.

2 Insert the actuating lever arm through the 5/16 in capscrew side of the insert to the desired length. Tighten the cap to 10 ft lbs. To make a right hand valve of a left hand valve, hold the valve body and rotate the lever arm 180°.

The recommended length of the actuating lever arm valve is 7 in / 17.78 cm. However, this can be increased or decreased. A maximum length of 11.5 in / 29 cm is acceptable.




**How to Adjust the Valve**

1 With the tow vehicle on level ground, build and maintain air pressure in excess of 65 psi/ 448 Kpa.

2 Rotate the lever arm down to fully exhaust the air springs or up to inflate the springs until the proper ride height is achieved.

3 Bring the lever arm of the valve to the neutral position and insert wood centering pins into the valve.

4 Slide the vertical link rod through the hole in the offset dampener link and install the vertical link grommet to the pin-on mounting bracket at the axle.

5 Place the mounting bracket on the axle and attach. Tighten the clamp on the offset dampener link and remove the wood centering pins.

6 **To exhaust the air spring:** Remove the vertical link grommet from the mounting bracket at axle pin and rotate the horizontal lever arm down.
**To inflate the air springs:** Rotate the horizontal lever up until the grommet is at the axle mounting bracket pin level.

7 Re-attach the grommet to the axle pin. Check if air springs are of equal firmness.

8 Trim off the excess vertical linkage past the offset dampener link if necessary for proper operation.

9 Connect the lower dampener links of both valves simultaneously. All air springs should inflate to the proper ride height. At this time, check to see that the air springs are of equal firmness.

10 The vertical link must extend completely through the offset dampener at all times. Trim off any excess rod on the horizontal lever arm.

# Operating Instructions

## Connecting the Tow Vehicle to the Trailer

1 Make sure that the trailer is at a sufficient height to allow proper coupling of the tow vehicle and the trailer.

2 Carefully back the towing vehicle under the trailer.

3 Connect the air and electrical lines from the tow vehicle to the trailer.

4 Check all trailer lights for proper operation.

5 Lock the trailer brakes.

6 Lock the fifth wheel.

7 Retract the landing gear to the fully retracted position.

## Removing the Tow Vehicle from the Trailer

1 Position the trailer so that the landing gear shoes will rest on a firm level surface when the landing gear is extended.

2 Shift the landing gear to high gear and extend the landing gear until the shoes contact the ground.

3 Shift the landing gear to low gear and lift the trailer approximately 1 inch / 2.54 cm.

4 Unlock the fifth wheel.

5 Disconnect the air and electrical lines.

6 Disconnect the hydraulic lines if using the truck wet kit.

7 Drive the tow vehicle out from under the trailer.

# Transport Instructions



## Observe and Obey:

- ☑ Trailer operators are solely responsible for making sure that the correct trailer is selected and machines are properly secured pursuant to US Department of Transportation regulations, other localized regulations and their company policy.
- ☑ Only qualified equipment operators should move the equipment on or off the trailer.
- ☑ The transport vehicle must be parked on a level surface.
- ☑ The transport vehicle must be secured to prevent rolling while the machine or equipment is being loaded onto the trailer.
- ☑ Be sure the vehicle capacity, loading surfaces and chains or straps are sufficient to withstand the equipment weight.

**Before Each Trip**

Make sure that the load is properly secured and the trailer is not overloaded.

Inspect components and attachments before moving the trailer.

- ❑ Perform pre-operation inspection.
- ❑ Make sure that the trailer is properly attached to the towing vehicle.
- ❑ Inspect wheels, nuts and bolts for tightness.
- ❑ Check the tire pressure. Bring to the specified level.
- ❑ Make sure that the landing gear is fully retracted and secured.
- ❑ Check that all electrical connections, lights and reflectors are in proper working order.

**After Each Trip**

Make sure that the load is still properly secured before unloading.

Inspect for any damages that could have occured during transit.

- ❑ Check for broken, missing or damaged parts.
- ❑ Check the tires for cuts or bulges.
- ❑ Check the hydraulic system and hoses for leaks or cut.

# Maintenance



## Observe and Obey:

- ☑ Only routine maintenance items specified in this manual shall be performed by the operator.
- ☑ Scheduled maintenance inspections shall be completed by qualified service technicians, according to the manufacturer's specifications.
- ☑ Make sure that the trailer is properly supported with a lift stand of sufficient rated capacity when performing maintenance.
- ☑ Use only Terex approved replacement parts.

**Maintenance Symbols Legend**

The following symbols have been used in this manual to help communicate the intent of the instructions. When one or more of the symbols appear at the beginning of a maintenance procedure, it conveys the meaning below.



Indicates that tools will be required to perform this procedure.



Indicates that new parts will be required to perform this procedure.

# Maintenance

## Check the Hydraulic Oil Level



Maintaining the hydraulic oil at a proper level is essential to trailer operation. Improper oil levels can damage hydraulic components.

To check the fluid level in the reservoir on self contained units, all cylinders in the system must be fully retracted (rods in). At this time, the fluid level in the reservoir should be 1 inch / 2.54 cm below the top of the reservoir body.

This trailer is equipped with a high pressure in-line filter for hydraulic system protection. It is recommended to change the filter after every 100 hours of hydraulic system service or annually. It is further recommended to change the reservoir fluid after every 1,000 hours of hydraulic service or annually. When changing the fluid, remove and clean the suction screen in the reservoir. This screen can be cleaned with any recognized solvent and blown dry before reinstalling.

| Operating temperature | Hydraulic oil specifications |
|---|---|
| Normal temperature | Standard or Universal 10-W |
| Arctic condition | Aviation grade Pennzoil 5606 Frigitranz Pennzoil AWX MV Arctic Tex #15 Aircraft 5-W code 1537 or equivalent |

## Hydraulic System



The hydraulic system in this trailer has two power supply options:

1. Self-contained (Engine option)
2. Wet kit (Tow vehicle)

The hydraulic system is a high pressure / low volume system. This trailer operates at 10-15 gpm at 2500 psi /38-57 lpm at 17,237 Kpa.

**Relief Setting**
The relief setting for each particular trailer is set at the Terex factory.

Note: Adjusting the relief higher than the recommended setting will cause damage to the control valve and cylinders, and will void all warranty on the unit.

**GPM / LPM (Volume Rating)**
The volume rating or gpm (gallons per minute) / lpm (liters per minute) for the hydraulic system in Terex trailers is 10 gpm / 38 lpm minimum and 15 gpm / 57 lpm maximum.

Note: More than the recommended flow will result in cylinder and valve damage, and will void all warranty.

# Maintenance

## Axles and Brakes

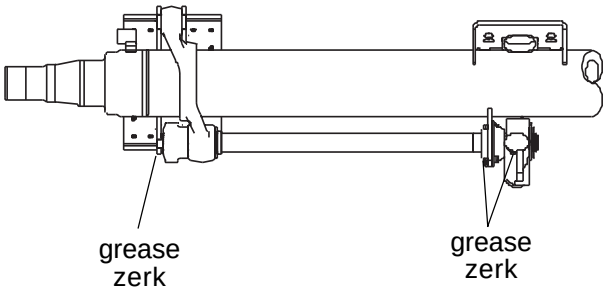
Proper lubrication of the wheel end is essential for axle performance. It is the axle manufacturer's recommendation to change the oil at least every 100,000 miles or once a year, and whenever the seal or brakes are replaced. Inspect the oil level every 1,000 miles. To establish the required oil level, allow a few minutes after vehicle operation or after adding oil to inspect the level.

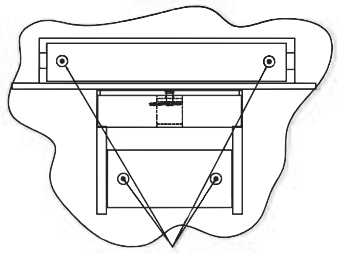
Petroleum based or synthetic oils that meet or exceed military specification MIL-L-2105D and API (American Petroleum Institute) service classification GL-1 through GL-5 are the minimum requirements for use in Spicer Trailer Axles. Each axle has 3 grease zerks on each brake cam for a total of 12 grease zerk locations on the axle.

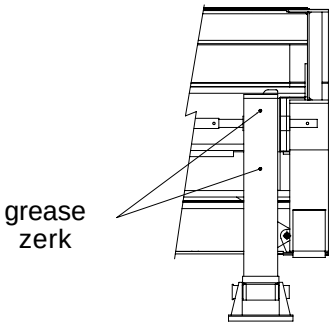
**Recommended SAE viscosities at different temperature ranges**

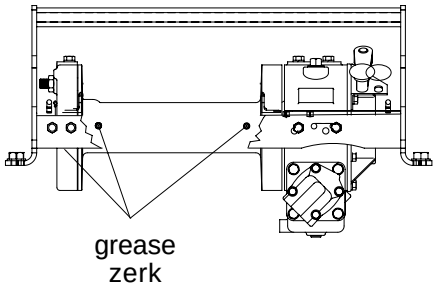
| Ambient Air Temperature | SAE Viscosity |
|---|---|
| -40° F to 32° F<br>-40° C to 0° C | SAE 75W |
| -40° F to 100° F<br>-40° C to 38° C | SAE 75W-90 |
| -40° F to above 100° F<br>-40° C to above 38° C | SAE 75W-140 |
| -15° F to 80° F<br>-26° C to 27° C | SAE 80W |
| -15° F to above 100° F<br>-26° C to above 38° C | SAE 80W-140 |
| -10° F to 38° F<br>-12° C to 100° C | SAE 90 |
| -10° F to above 38° F<br>-12° C to above 100° C | SAE 85W-140 |
| -32° F to above 100° F<br>0° C to above 32° C | SAE 140 |

⚠ Do not mix motor oil with EP Gear oil.



# Maintenance

**Manufacturer's suggested preventative maintenance**

**Every 1,000 miles:**

- ❑ Check the oil level in the wheel hub and inspect the wheel for leaks.

**15,000 miles or minimum of twice a year:**

- ❑ Check the brake adjustment.
- ❑ Repack the wheel bearings (apply grease).

**25,000 to 30,000 miles:**

- ❑ Check the lining wear and estimate replacement time. Replace with new shoes or reline when the thickness of the lining is 1/4 in / 0.635 cm at thinnest point or 1/16 in / 0.16 cm above rivet or bolt head. Replace any cracked, broken or oil-soaked linings immediately.
- ❑ Inspect the camshaft, camshaft spider bushings and camshaft support bracket bushing for any signs of wear.
- ❑ Lubricate the camshaft bushings.
- ❑ Inspect the brake drums for heat checks, grooves, hot spots, glazing, cracks and out-of-roundness.
- ❑ Inspect all welds for signs of cracking.

**100,000 miles, once a year or at brake reline:**

- ❑ Replace the wheel bearing lubricating oil (if applicable).
- ❑ Check the brake air chambers and slack adjusters.
- ❑ Inspect the brake rollers, roller shaft, anchor pins and bushings and replace if necessary.
- ❑ Lubricate the brake adjusters.
- ❑ Check the shoes for bent shoe ribs, cracks in shoe table welds or ribs and elongated rivet holes. Replace the shoes if any of these conditions exist.

## Scheduled Maintenance

Scheduled maintenance must be completed by a person trained and qualified to perform maintenance on this trailer according to the schedule and procedures found in the service manual for this machine.

# Troubleshooting

| Condtion | Possible cause | Possible remedy |
|---|---|---|
| All air springs flat | Insufficient air pressure to suspension | Build tractor air pressure in excess of 65 psi |
| | Defective brake protection valve | Remove and replace |
| | Height control valve inlet fitting clogged | Remove and replace |
| | Leak in system | Locate and repair |
| | Defective on/off valve | Replace valve |
| Air spring flat on side | Improperly adjusted height control | Adjust to correct ride height (see Height Control Adjustment procedure) |
| | Air spring blown out or leaking | Locate and repair |
| | Insufficient air supply to air spring | Check height control valve inlet fitting for obstruction |
| | Defective height control valve | Replace valve |
| | Defective pilot valve | Locate and replace valve |
| Suspension deflates rapidly when parked | Leak in air suspension system | Locate and repair |
| | Leaking air spring | Replace |
| | Punctured or cut | Repair or replace and check installation for obstructions |
| Trailer side tracks to left or right | Axle out of alignment | Realign axles by shifting left hand index aligning blocks and weld securely to frame bracket |
| | Index aligning blocks not welded | Align and weld securely to frame brackets |
| | Front bushings or Delrin liners worn | Remove and replace |
| Shock absorbers pulling apart | Height control valve adjusted too high | Adjust valves to correct ride height |
| | Operating vehicle in regulated mode | Switch to normal mode during transport |
| Excessive trailer sway or lean | Axle connections loose | Tighten axle caps metal to metal, front and rear |
| | Axle connection rubber wrappers and pads worn | Remove and replace |
| | Height control valves out of adjustment | Re-adjust valves to correct ride heights |

# Specifications

| Model | | HFT 70 RS |
|---|---|---|
| Length, overall | 48 ft | 14.63 m |
| Length, main deck including the gooseneck ramp and subframe deck | 29 ft 5 in | 8.97 m |
| Width, deck | 102 in | 2.59 m |
| Height, main deck, loaded | 35.5 in | 90.2 cm |
| Ground clearance, loaded | 18.5 in | 47 cm |
| Tires | | 235/75R 17.5 16 ply |
| Axle capacity | 22,500 lbs | 10,205 kg |
| Air brakes with ABS braking system | $12^{1}/_{4}$ x $7^{1}/_{2}$ in | 311 x 191 mm |
| Estimated weight | 19,500 lbs | 8,845 kg |
| Hydraulic Folding Flip Tail | | |
| Break over angle | | 6 ° |
| Adjustable loading height | | Up to 60 in / 1.52 m |
| Length, overall | 14 ft 6 in | 4.42 m |
| Length, top platform ramp | 9 ft 6 in | 2.9 m |
| Length, flip tail | 5 ft | 1.52 m |
| Gooseneck | | |
| Length, ramp | 10 ft | 3.05 m |
| Length, deck | 9 ft | 2.74 m |
| Swing clearance | 86 in | 12.18 m |
| King pin height | 51 in | 1.30 m |
| Winch | | |
| Standard 60 ft x 0.5 in / 18.3 m x 12.7 mm cable | 12,000 lbs | 5,443 kg |
| Option 100 ft x 0.56 in / 30.5 m x 14.3 mm cable | 20,000 lbs | 9,072 kg |

## Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to Terex.

If NHTSA receives similar complaints, it may open an investigation and, if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in any individual problems between you, your dealer or Terex.

To contact NHTSA you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (366-0123 in Washington DC area) or write to:

**NHTSA**
**U.S. Department of Transportation**
**400 7th Street SW, (NSA-11)**
**Washington DC 20590**

You can also obtain information about motor vehicle safety from the Hotline.

# Warranty

Terex warrants this product to be free from defects in material and workmanship from the date the product is originally invoiced to the purchaser or from the date the new product is first put into service, whichever comes first. Warranty coverage period is one (1) year from the date of delivery. Terex will repair or replace, at its option, the defective material or workmanship at its factory or authorized service center. Buyer shall be responsible for all freight charges incurred in sending the product to an authorized service center or to Terex for repair and in returning it to Buyer.

This warranty does not apply to any product which has been subjected to misuse, misappliction, neglect (including but not limited to improper maintenance), accident, improper installation, modification (including but not limited to use of unauthorized parts or attachments), adjustment or repair. Engines, motors and any accessories furnished with or used in Terex trailers, not manufactured by Terex are not included in the warranty but are sold only with the express warranty, if any, of the manufacturers thereof. This warranty is limited to the first purchaser or user and is not transferable.

THE FOREGOING IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED (INCLUDING THOSE OF MERCHANTABILITY AND FITNESS OF ANY PRODUCT FOR A PARTICULAR PURPOSE), AND OF ANY OTHER OBLIGATION OR LIABLITY ON THE PART OF THE COMPANY.

## Limitation of Liability

It is expressly understood that Terex's liability for its products, whether due to breach of warranty or otherwise, is limited to the furnishing of such replacement parts, F.O.B. factory, and Terex will not be liable for any injury, loss, damage, or expense, whether direct or consequential, including but not limited to loss of use, income, profit, production, increase in cost of operation, spoilage of or damage to material arising in connection with the sale, installation, use or inability to use or the repair or replacement of Terex products.