NS2500 Single Acting Telescopic Cylinder
For Dump Trailers and Trucks

Available Sizes:
- NS85DC-64-190 54.00 190
- NS85DC-64-220 60.00 220
- NS85DC-64-235 64.62 235
- NS85DC-64-250 68.12 250
- NS85DC-64-265 71.00 265
- NS85DC-64-285 78.50 285

Cylinder Model Closed Length Stroke (inches)
- Pin to Pin (Inches)

Cylinder Mounting
Cylinders are not to be used as a stabilizer on dump vehicles. The cylinder is strictly a lifting device and is not a structural member of the dumping unit. The cylinder should float in the pin mountings. There should be a clearance of 1/4 inch per side on the eyes. The cylinder plunger or one of the sleeves should be extended a minimum of 1/4 inch when the dump is in the down position.
Why Do You Need The NS2500?

> **Structurally Stronger**
  - Heavy wall tubing to withstand higher operating pressures up to 2500 psi
  - Increased tube diameter for greater lifting force
  - 30% more bearing surface for increased stability
  - Helps prevent bulging / less bending
  - Greater safety factor

> **Bleedless Design**
  - No manual bleeding of air required (See illustration on page 3)
  - (1) less leak point

> **Improved Seal Technology**
  - Two-part seal good for both low and high pressure
  - Tighter machining tolerances
  - Lower maintenance costs

> **More Lifting Capacity**
  - Increased lifting capacity on all stages
  - 28% more lifting capacity on the plunger
  - Prevents stalling

> **Smoother Operation**
  - More bearing surface area
  - Diametrical spacing of four oil transfer holes which allows for smooth flow
  - Smoother extension and retraction due to reduced fluid pressure
  - Additional piston grooves for more laminar flow
  - Large flow area between extend and retract side of the piston to ease movement of oil.

**Warning** — Before working on a telescopic cylinder mounted on a truck or trailer unit, use supports or holding devices that will prevent unintentional lowering of the body. Place control valve in the “Lower” position to ensure that all pressure has been relieved from the cylinder.
NS2500 Bleederless Design

Increased bearing support

New two-piece OD seal

Hollow (sealed) plunger

Heavy wall tubing

Reduced annular area between sleeves

Improved flow paths between stages

Greater lifting force - large diameter tube

*36.5 gal. to extend

*4.7 gal. to fill

*Weight – 780#

Max. lifting force 106,913 lbs. @ 2000 psi

Oil fills annular area when cylinder is retracted. Oil is forced back into tank during retract. Oil does not fill the plunger tube.

*Based on a stroke length of 265”
Industry Standard “Manual Bleeder”

Manual air bleeder valve

Air is trapped at the top of the plunger

OD "V" style packing

Plunger fills with oil

*31.5 gal. to extend

*8.4 gal. to fill

*Weight – 710#

Max. lifting force
97,400 lbs. @ 2000 psi

Oil fills annular area when cylinder is retracted. During extend oil is forced out of annular area. Aerated oil rises into the plunger and cannot be purged without manual bleeder.

“Based on a stroke length of 265”
Operation/Maintenance

 Connecting Trailer Hydraulics to Tractor
When connecting the tractor hydraulics to the trailer it is possible that oil will drain from the hydraulic circuit. Air will be present in the hydraulic system until the system is connected and filled with oil. The NS2500 series cylinder design eliminates the need to manually bleed air through a purge valve. To purge the air from the hydraulic system; cycle the cylinder to full extension 2-3 times. The presence of air will cause a mushy, erratic bouncing action. If the condition continues after (6) full cycles check all hydraulic connection for tightness. Contact Parker customer service if condition persists.

 Hydraulic Pump and Valve Operation:
A 3-Line installation is recommended to allow for the use of an oil return – line filter. Caution — Roading with the valve in the raise/lower position will cause air to be entrained into the hydraulic system. Air will cause erratic, spongy operation of the hydraulic cylinder. Return the valve to the neutral position before roading.

 Cylinder Maintenance:
When equipment is not in use, cylinder should be fully retracted to prevent rust and external damage. Seals, wipers, and bushings are considered normal maintenance or service items. These items are subject to contamination from external and internal foreign materials, many which are abrasive in nature, causing premature wear or damage, to the extent that replacement are required. Use only genuine Parker components.

 General Hydraulic Fluid Recommendations:
High viscosity oil of approx. 100-150 SUS @100°F is required (150 SUS is typical). Hydraulic oil should be changed seasonally for high duty systems. The minimum recommended change interval is once a year, preferably in the Fall.

 Filtration
A 10 micron full flow return line filter is recommended to extend component life. Oil cleanliness should be maintained at ISO 19/17/15. Parker filter model #50AT210BN25DDN.

 Reservoir
Tanks should be large enough to contain the amount of oil needed to fully extend the cylinder. Accessories should include a filtered breather cap and pump inlet strainer (100 mesh). A large clean-out port to ease periodic cleaning is also recommended.
Available Sizes:

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