

Hyster S80XMBCS vs. Toyota 7FGCU35-BCS



Ergonomics

Operator Entry



Hyster Three Point Entry

- Step height 15.38" (400 mm)
- Rubber coated handgrip
- Hip restraint grab point

Toyota

- Toyota step height 17.5"
- Rubber coated handgrip
- No hip restraint grab point on Toyota

Mounting Step



Hyster

- Large open step with aggressive tread pattern
- Open frame underneath tread allows debris to be washed out



Toyota

- Less aggressive tread pattern
- No opening in frame allows debris to become trapped, cause corrosion

Floorboard



- Hyster forward placed pedals—provide more foot room
- Fit to operator
- Hyster floormat is 5/8" thick



- Toyota floormat 3/8" thick



Toyota
accelerator pedal

Operator Compartment



Hyster

- Cup holder and convenience tray
- Large, easy-to-read dash display
- 13.8" diameter steering wheel



Toyota

- Pencil holder on right side obscured by hydraulic levers
- Dash display hard to see when wheel is tilted forward
- 14" diameter steering wheel

Seats



Hyster

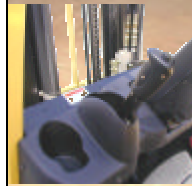
- Non-suspension seat standard
- Arm rest / Hip restraint

Toyota

- Semi-suspension seat standard
- Low seat back offers no upper back support
- No arm rest / hip restraint
- Wing back seat may be restrictive to larger operators

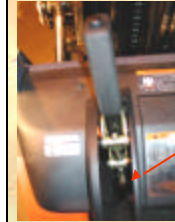


Parking Brake



Hyster

- Parking brake tension easily adjusted without tools



Toyota

- Parking brake tension adjustment requires screwdriver, hard to get to

Hydraulic Controls



Hyster

- Seat-side hydraulic control levers



Toyota

- Cowl-mounted hydraulic control levers

Overhead Guard Visibility



Hyster

- Vertical bar-on-edge design offers superior visibility



Toyota

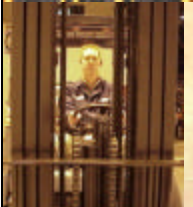
- Horizontal slanted bars may restrict visibility

Through the Mast Visibility



Hyster

- Alignment of free lift chains and hoses offers superior visibility



Rearward Visibility

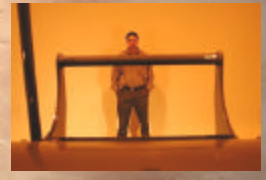
Hyster

- 64" from floor to top of LPG tank



Toyota

- 66" from floor to top of LPG tank



LPG Tank Bracket



Hyster

- Available with optional swing out, drop down tank

Toyota

- Pull-down LPG tank bracket
- In full pulled down position, center line of tank still 54" from floor

Productivity and Durability

Air Intake



Hyster

- Air intake 2-1/2" x 6-1/2"
- Louvers Slant upward
- 63% more air intake area than Toyota

Toyota

- Air Intake 1-1/2" x 4"
- Louvers slant downward

Air Flow



Hyster

- Larger, less restricted air inlet



Toyota

- Smaller, more restricted air inlet

Steer Axle



Hyster

- Cast Ductile Iron steer axle



Toyota

- Fabricated steer axle

Brakes



Hyster

- Akebono self-energizing brakes
- Vacuum booster provides smooth actuation, low pedal effort



Toyota

- Planetary reduction at wheel



Cooling

Hyster

- Pusher fan and radiator cowl direct air flow and provide optimum cooling
- Beta weld Square Wave® design

Toyota

- Puller fan on back side of radiator
- Conventional open core design

Cooling – Counterweight Opening

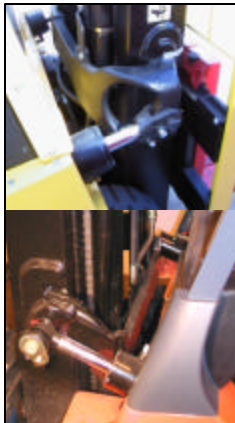


Hyster

- Two 10" x 11.875" openings
- Total 237.5 sq. in. – 33% more air flow than Toyota

Toyota

- One opening 21" x 7.5"
- Total 157.5 sq. in.



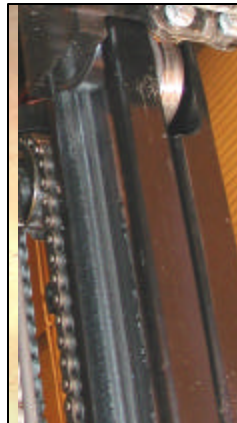
Mast & Carriage

Hyster

- Heavy-duty cast iron crossmembers ears
- Beefier mast channels 7-1/4" x 2-1/4"
- Cast iron tilt cylinder rod anchors

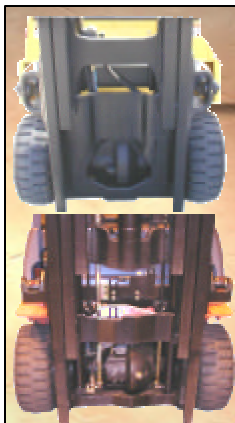
Toyota

- Fabricated crossmember
- 7" x 2-1/4" mast channels



Mast

- Toyota mast channel displaying signs of channel web milling



Mast & Carriage

Hyster

- Mast design offers increased protection of hydraulic lines and drive axle

Toyota

- Open design offers less protection for hydraulic lines and drive axle



Service Access

Hyster

- Push button handle opens engine compartment
- Swing out side panels and battery tray
- Floor mat & floor plate lift out without tools
- Radiator cover lifts out without tools



Toyota

1. Unlock & pull down tank
2. Slide seat forward
3. Two thumbscrews open radiator cover (only if the radiator needs to be accessed)
4. Open engine compartment by release lever on steer column
5. Rubber floor mat & floor plate lift out without tools



Transmission Oil Check

Hyster

- Check door in floor mat & floor plate for quick check



Toyota

- Floor mat must be removed
- Check door in floor plate
- Dipstick location requires entire hand below floor plate



Hydraulic Oil Check

Hyster

- Easy, unrestricted access



Toyota

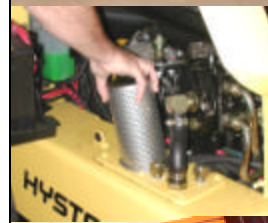
- Access restricted by air filter
- Sharp edges on frame



Hydraulic Filter

Hyster

- Two screws release cover plate for quick access



Toyota

- Hydraulic hoses & plate must be removed to access – restricted by frame



Power Distribution Module

Hyster

- Located under dash
- Easy to access



Toyota

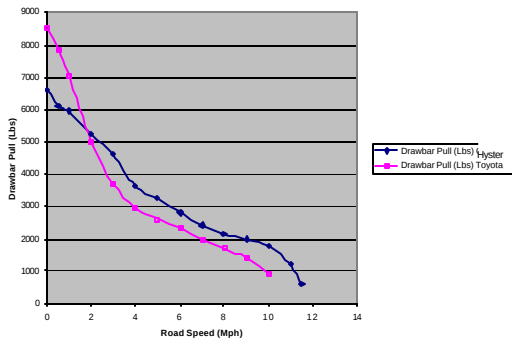
- Located in engine compartment
- Could be affected by moisture when steam cleaning engine



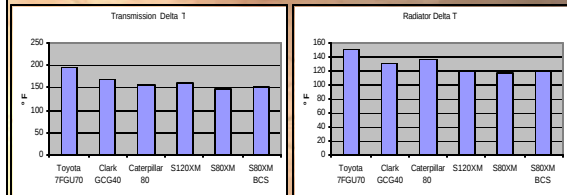
Performance Specifications

	Hyster S80XM-BCS	Toyota 7FGCU35-BCS
Capacity lbs.	8000	8000
Power Type	Gasoline	Gasoline
Mast, std.	2 stage LFL	2 stage LFL
MFH	124	120
Length to fork face	94.1	94.9
Outside turn radius	82.8	82.1
Right Angle Aisle	100.4	100.4
Drawbar pull lbf	6962	9900
Travel Speed, maximum forward mph	11.7	11.8
Lift Speed NL/RL	134 / 123	109 / 101
Torque	202.5 @ 1600 rpm	209 @ 1200 rpm

Hyster vs. Toyota Drawbar Pull



Cooling System Performance



Paper Roll Truck Considerations

- Hyster hydraulic system auxiliary outputs maintain suitable flow/pressure for attachment.
- Short load face - S70-120XM 120 is 18.19 inches, Toyota 7FGCU55 is 20.9 inches, to face of forks.
- Roll handling capacity - S120XM PRS can handle rolls up to 8600 lbs.
- Hoist Speed loaded - S120XM is 89 fpm, 7FGCU55 is 79 fpm.
- Hyster five function valve allows operation of swing frame clamp without solenoids/switches.
- Accumulator and optional pressure regulator valve for clamp.
- Mast - heavy channel sections with cast cross member ears.
- Designed and tested for use with paper roll clamp.

S70-120XM Hydraulic Flows for Attachment Operation

- S70-120XM has a hoist pressure of 3000 psi, and lower pressure 2250 psi for auxiliary circuit, achieved with a secondary relief valve. Maximum flows at the attachment are 20-21 gpm. Flows and Pressures which match the requirements of the Cascade paper roll clamp.
- Competitive units which do not have secondary relief and therefore operate at the same pressure for hoist and auxiliary functions, generate excessive flows up to 30 gpm. These flows exceed the capability of the clamp, and will cause truck to dump hydraulic oil at relief pressure during clamp operation, such as during rotation.

Cascade Pressure and Flow Control Valve

- To address this flow mismatch problem, Cascade Corp. developed an add-on pressure and flow control valve, which diverts the excess flow back to the tank and limits pressure in auxiliary hydraulic system. This is offered by Toyota on their Series 7 trucks.
- S70-120XM truck has flows matched to the clamp requirements already, making such a system unnecessary except under the most extreme conditions.
- Cascade performed a parasitic loss test on the S70-120XM truck and concluded that adding the Cascade auxiliary pressure and flow control valve would not substantially improve the Hyster hydraulic system.
- Disadvantages of adding the flow divider/secondary relief system
 - Additional hydraulic plumbing.
 - Additional cost.

Good Luck! Good Selling



Summary

- Hyster offers superior
 - Visibility
 - Productivity
 - Serviceability
 - Cooler engine coolant and transmission temperatures