

***HYSTER***

## TABLE OF CONTENTS

|   |   |
|---|---|
| Hydraulic System (C60-80Z and C60-80Z <sup>AC</sup> ) .....               | 1 |
| Hydraulic Oils .....  | 1 |
| Master Drive Unit Specifications.....                                     | 2 |
| Gear Oils.....  | 2 |
| Grease.....   | 3 |
| Tire Specifications.....  | 3 |
| Torque Specifications .....   | 4 |
| Master Drive Unit .....   | 4 |
| Brake .....   | 4 |
| Steering .....  | 4 |
| Electrical .....  | 4 |
| Coupler (T5Z, T5Z <sup>AC</sup> , T7Z, and T7Z <sup>AC</sup> ) .....      | 4 |
| Lift Pump (C60Z, C60Z <sup>AC</sup> , C80Z, and C80Z <sup>AC</sup> )..... | 4 |
| Travel Speeds .....   | 5 |
| T5Z, T5Z <sup>AC</sup> , T7Z, and T7Z <sup>AC</sup> .....                 | 5 |
| C60Z, C60Z <sup>AC</sup> , C80Z, and C80Z <sup>AC</sup> .....             | 5 |
| Truck Weight.....   | 5 |
| Battery Specifications and Adjustments .....                              | 6 |

|   |
|---|
| <p>This section is for the following models:</p> <p>T5Z [A476];<br/> T7Z [A477];<br/> C60Z [A478];<br/> C80Z [A479];<br/> T5Z<sup>AC</sup> [B476];<br/> T7Z<sup>AC</sup> [B477];<br/> C60Z<sup>AC</sup> [B478];<br/> C80Z<sup>AC</sup> [B479]</p> |
|---|

(More Content includes: Brake system, Capacities, and specifications, Frame, Hydraulic, System, Industrial battery, Main control, Valve, Mast repair, Fasteners, Schematics diagrams, Steering axle, Steering system, Wire harness repair And more)

**[Click Here](#)**

**Get all the content  
after purchase**

**Thank you very  
much.**

## Hydraulic System (C60-80Z and C60-80Z<sup>AC</sup>)

| Specification  | C60Z and C60Z <sup>AC</sup>   | C80Z and C80Z <sup>AC</sup>                        |
|--|---|--|
| Motor Power <sup>1</sup>                               | 1.2 kW (1.6 hp)   | 1.5 kW (2.0 hp)                                    |
| Hydraulic Relief Pressure                              | 2700 psi  | 3500 psi   |
| Lifting Speed  |   |  |
| With Load <sup>2</sup>                                 | 4.7 seconds   | 5.7 seconds  |
| Without Load   | 3.5 seconds   | 3.9 seconds  |
| Lowering Speed   |   |  |
| With Load <sup>2</sup>                                 | 1.2 seconds   | 2.4 seconds  |
| Without Load   | 1.8 seconds   | 6.5 seconds  |
| Pump Displacement                                      | 1.50 cm <sup>3</sup> (0.092 in. <sup>3</sup> )/rev                    | 2.00 cm <sup>3</sup> (0.122 in. <sup>3</sup> )/rev |
| Allowable Drift With Load                              | 6.4 mm (0.25 in.) Maximum in 10 minutes @ 21°C (70°F) Oil Temperature |  |
| Hydraulic Reservoir Capacity                           | 0.71 liter (0.75 qt)  | 0.85 liter (0.90 qt)                               |
| <sup>1</sup> 24 Volts DC<br><sup>2</sup> Capacity Load |   |  |

## Hydraulic Oils

| Operating Condition  | Standard                        | CS/Freezer/Food Processing       | Arctic                           |
|--|---------------------------------|----------------------------------|----------------------------------|
| <b>Truck Temperature Range</b>   | 0 to -84°C<br>(32 to -120°F)    | -18 to -84°C<br>(0 to -120°F)    | -40 to -84°C<br>(-40 to -120°F)  |
| <b>For All Hydraulically Actuated Equipment</b>  |                                 |                                  |                                  |
| <b>Specification</b>   | ISO VG 46 Antiwear<br>(HCE-140) | Exxon Univis <sup>®</sup> HVI 26 | Exxon Univis <sup>®</sup> HVI 26 |
| <b>Pour Point Maximum</b>  | -15°C (5.0°F)                   | -60°C (-76.0°F)                  | -60°C (-76.0°F)                  |
| <b>Field Personnel Note:</b> The product listed above is the approved source that meets or exceeds <b>HYSTER</b> specifications. The use of products other than that listed above is unauthorized. |                                 |                                  |                                  |

## Master Drive Unit Specifications

| Model                                    | Motor Power      | Gear Ratio | Capacity           | Oil Specification |
|--|------------------|------------|--------------------|-------------------|
| T5Z and C60Z                             | 2.0 kW (2.7 hp)  | 16:1       | 1.7 liter (1.8 qt) | Gear Oil          |
| T7Z and C80Z                             | 2.8 kW (3.8 hp)  | 17.8:1     | 2.0 liter (2.1 qt) | Gear Oil          |
| T5Z <sup>AC</sup> and C60Z <sup>AC</sup> | 4.0 kW (5.36 hp) | 16:1       | 1.7 liter (1.8 qt) | Gear Oil          |
| T7Z <sup>AC</sup> and C80Z <sup>AC</sup> | 4.0 kW (5.36 hp) | 17.8:1     | 2.0 liter (2.1 qt) | Gear Oil          |

## Gear Oils

| Operating Condition   | Standard/CS/Freezer/Food Processing   | Arctic   |
|---|---|--|
| SAE Grade   | 80W-90  | 75W-90   |
| Type  | Multipurpose EP   | Multipurpose EP  |
| Base Oil  | Conventional Petroleum  | Synthetic  |
| MIL-Specification No.   | MIL-L-2105C   | MIL-L-2105C  |
| API Service Classification  | GL-5  | GL-5   |
| Anticipated Ambient Temperature   | -18 to 49°C (-15 to 100°F)<br>Most <b>HYSTER</b> lift truck operations will fall within this temperature range. | As low as -60°C (-51°F)<br>Primarily intended for cold storage and/or Arctic conditions; can be used as high as 90°C (32°F). |
| Approved Sources  |   |  |
| <b>Chevron</b>  | Chevron Universal Gear Lube 80W/90  | No Product   |
| <b>Exxon</b>  | Exxon Gear Oil GX 80W/90  | No Product   |
| <b>Mobil</b>  | Mobilube HD 80W/90  | Mobilube SHC 75W/90  |
| <b>Pennzoil</b>   | Pennzoil MP 4092  | No Product   |
| <b>Phillips 66</b>  | Philube SMP Gear Oil 80W/90   | No Product   |
| <b>Solene Lub. Inc.</b>   | Solene Gear Oil #905  | No Product   |
| <b>Sun</b>  | Sunfleet GL-5 Gear Lube 80W/90  | No Product   |
| <b>Union 76</b>   | Unocal MP Gear Lube LS 80W/90   | No Product   |
| <b>Field Personnel Note:</b> The products listed above are the approved sources that meet or exceed <b>HYSTER</b> specifications. The use of products other than that listed above is unauthorized. |   |  |

## Grease

| Fittings and Bearings |                     |                        |                 |
|-----------------------|---------------------|------------------------|-----------------|
| Application           | Standard/CS/Freezer | Arctic/Food Processing | Steer Bearings  |
| Approved Vendor       | Mobilgrease® 28     | Amsoil GHD®            | Amsoil GHD®     |
| Oil                   | Synthetic           | Synthetic              | Synthetic       |
| Thickener             | Clay                | Lithium Complex        | Lithium Complex |
| Grade NGLI            | 1.5                 | 2.0                    | 2.0             |
| Moly-Fortified        | No                  | Yes                    | Yes             |
| Dropping Pt.          | 310°C (590°F)       | 288°C (550°F)          | 288°C (550°F)   |

**Field Personnel Note:** The product listed above is the approved source that meets or exceeds **HYSTER** specifications. The use of products other than that listed above is unauthorized.

## Tire Specifications

| Lift Truck Model            | Drive Tire     |   | Load Wheel        |   | Casters       |                   |
|-----------------------------|----------------|---|-------------------|---|---------------|-------------------|
|                             | Size           | Composition   | Size              | Composition   | Size          | Composition       |
| T5Z and T5Z <sup>AC</sup>   | 10.0 × 5.0 in. | Poly <sup>1</sup><br>(Standard)<br>Rubber <sup>2</sup><br>(Optional)<br>Siped-Poly <sup>1</sup><br>(Optional) | 8.0 × 5.0 in.     | Rubber <sup>2</sup><br>(Standard)<br>Poly <sup>3</sup> (Optional) | Not Available |                   |
| T7Z and T7Z <sup>AC</sup>   | 12.0 × 4.5 in. | Poly <sup>1</sup>   | 8.0 × 5.0 in.     | Rubber <sup>2</sup><br>(Standard)<br>Poly <sup>3</sup> (Optional) | Not Available |                   |
| C60Z and C60Z <sup>AC</sup> | 10.0 × 5.0 in. | Rubber <sup>2</sup><br>(Standard)<br>Poly <sup>1</sup><br>(Optional)<br>Siped-Poly <sup>1</sup><br>(Optional) | 3.25 × 6.50 in.   | Single/Poly <sup>4</sup><br>(Standard)                            | 4.0 × 2.5 in. | Poly <sup>4</sup> |
|                             |                |   | 3.250 × 3.125 in. | Dual/Poly <sup>4</sup><br>(Optional)                              |               |                   |
| C80Z and C80Z <sup>AC</sup> | 12.0 × 4.5 in. | Poly <sup>1</sup>   | 3.25 × 6.50 in.   | Single/Poly <sup>4</sup><br>(Standard)                            | 4.0 × 2.5 in. | Poly <sup>5</sup> |
|                             |                |   | 3.250 × 3.125 in. | Dual/Poly <sup>4</sup><br>(Optional)                              |               |                   |

<sup>1</sup>Durometer 90  
<sup>2</sup>Durometer 65  
<sup>3</sup>Durometer 93  
<sup>4</sup>Durometer 95  
<sup>5</sup>Durometer 92

## Torque Specifications

### MASTER DRIVE UNIT

**Lower Nut on Motor Mounting Stud (4 Places)**  
26 N•m (19 lbf ft)

**Upper Nut on Motor Mounting Stud (4 Places)**  
20 N•m (15 lbf ft)

**Transmission to Frame Mounting Bolts (4 Each)(C60Z, C60Z<sup>AC</sup>, T5Z, and T5Z<sup>AC</sup>)**  
201 N•m (148 lbf ft)

**Transmission to Frame Mounting Bolts (4 Each)(C80Z, C80Z<sup>AC</sup>, T7Z, and T7Z<sup>AC</sup>)**  
300 N•m (221 lbf ft)

**Top Cover to Support Bracket**  
32 N•m (24 lbf ft)

**Pinion Gear to Shaft**  
180 N•m (133 lbf ft)

**Drive Shaft Gear Retaining Nut**  
300 N•m (221 lbf ft)

**Drain Plug**  
60 N•m (44 lbf ft)

**Fill Plug**  
45 N•m (33 lbf ft)

**Lug Bolts (5 Each) (C60Z and T5Z)**  
201 ±9 N•m (148 ±7 lbf ft)

**Lug Nuts (5 Each) (C80Z, C80Z<sup>AC</sup>, T7Z, and T7Z<sup>AC</sup>)**  
201 ±9 N•m (148 ±7 lbf ft)

### BRAKE

**Installation Allen-Head Capscrews (3 Each) (C60Z, C60Z<sup>AC</sup>, T5Z, and T5Z<sup>AC</sup>)**  
10 N•m (89 lbf in)

**Installation Allen-Head Capscrews (3 Each) (C80Z, C80Z<sup>AC</sup>, T7Z, and T7Z<sup>AC</sup>)**  
17 N•m (13 lbf ft)

### STEERING

**Support to Frame Mounting Bolts (4 Each)**  
88 N•m (65 lbf ft)

**Steer Bearing Locking Nut**  
27 N•m (20 lbf ft)

**Control Handle Bracket to Control Handle Arm (4 Each)**  
14 N•m (10 lbf ft)

**Control Handle Head to Control Handle Bracket (4 Each)**  
9 N•m (80 lbf in)

**Directional Control Shaft to Control Handle Bracket (2 Each)**  
42 N•m (31 lbf ft)

### ELECTRICAL

**Traction Motor Terminals (4 Each)**  
9 N•m (80 lbf in)

### COUPLER (T5Z, T5Z<sup>AC</sup>, T7Z, AND T7Z<sup>AC</sup>)

**Coupler (Jaw-Type) to Frame (4 Each)**  
102 N•m (75 lbf ft)

**Coupler (Pin-Type) to Frame (2 Each)**  
203 N•m (150 lbf ft)

### LIFT PUMP (C60Z, C60Z<sup>AC</sup>, C80Z, AND C80Z<sup>AC</sup>)

**Pressure Port Fitting**  
38 N•m (28 lbf ft)

## Travel Speeds

### T5Z, T5Z<sup>AC</sup>, T7Z, AND T7Z<sup>AC</sup>

| Model | No Load |     |               |          |     |               | 200 lbs Drawbar Pull |     |               | 300 lbs Drawbar Pull |     |               | 5000 lbs GTW |     |               |
|-------|---------|-----|---------------|----------|-----|---------------|----------------------|-----|---------------|----------------------|-----|---------------|--------------|-----|---------------|
|       | Level   |     |               | 5% Grade |     |               | Level                |     |               | Level                |     |               | 5% Grade     |     |               |
|       | Speed   |     | Batt.<br>Amp. | Speed    |     | Batt.<br>Amp. | Speed                |     | Batt.<br>Amp. | Speed                |     | Batt.<br>Amp. | Speed        |     | Batt.<br>Amp. |
|       | km/h    | mph |               | km/h     | mph |               | km/h                 | mph |               | km/h                 | mph |               | km/h         | mph |               |
| T5Z   | 12.6    | 7.8 | 98.3          | 5.9      | 3.7 | 176.0         | 7.1                  | 4.4 | 135.6         | N/A                  | N/A | N/A           | 4.7          | 2.9 | 259.0         |
| T7Z   | 13.5    | 8.4 | 138.9         | 8.9      | 5.5 | 187.0         | N/A                  | N/A | N/A           | 6.8                  | 4.2 | 225.4         | 4.6          | 2.8 | 285.0         |

**NOTE:** Information applies to trucks equipped with rubber drive tire and 454 kg (1000 lb) battery with specific gravity 1.265 or higher.

### C60Z, C60Z<sup>AC</sup>, C80Z, AND C80Z<sup>AC</sup>

| Model | No Load |     |               |          |     |               | Loaded to Capacity |     |               |          |     |               |
|-------|---------|-----|---------------|----------|-----|---------------|--------------------|-----|---------------|----------|-----|---------------|
|       | Level   |     |               | 5% Grade |     |               | Level              |     |               | 5% Grade |     |               |
|       | Speed   |     | Batt.<br>Amp. | Speed    |     | Batt.<br>Amp. | Speed              |     | Batt.<br>Amp. | Speed    |     | Batt.<br>Amp. |
|       | km/h    | mph |               | km/h     | mph |               | km/h               | mph |               | km/h     | mph |               |
| C60Z  | 13.0    | 8.1 | 56.6          | 9.0      | 5.6 | 129.0         | 9.5                | 5.9 | 110.0         | 4.2      | 2.6 | 294.0         |
| C80Z  | 12.6    | 7.8 | 95.3          | 8.0      | 5.0 | 132.0         | 7.4                | 4.6 | 145.4         | 3.9      | 2.4 | 251.0         |

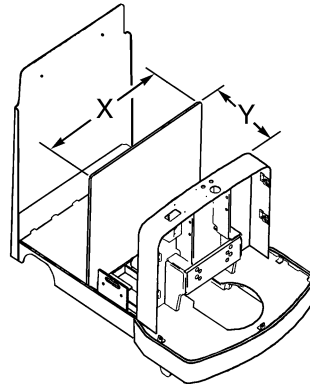
**NOTE:** Information applies to trucks equipped with poly drive tire and 454 kg (1000 lb) battery with specific gravity 1.265 or higher.

## Truck Weight

| Unit                        | Less Battery |      | With Battery |      |
|-----------------------------|--------------|------|--------------|------|
|                             | kg           | lb   | kg           | lb   |
| T5Z and T5Z <sup>AC</sup>   | 541          | 1192 | 994          | 2192 |
| T7Z and T7Z <sup>AC</sup>   | 587          | 1295 | 1041         | 2295 |
| C60Z and C60Z <sup>AC</sup> | 733          | 1616 | 1187         | 2616 |
| C80Z and C80Z <sup>AC</sup> | 836          | 1842 | 1289         | 2842 |



## Battery Specifications and Adjustments



BO030000

Figure 1. Battery Compartment

| Battery and Battery Compartment Dimensions |                        |                       |        |                              |                 |                              |                 |                        |                |
|--|------------------------|-----------------------|--------|------------------------------|-----------------|------------------------------|-----------------|------------------------|----------------|
| Model                                      | Battery Compartment    |                       |        | Battery                      |                 |                              |                 |                        |                |
|  | Dimensions             |                       |        | Length (X)                   |                 | Width (Y)                    |                 | Capacity <sup>2</sup>  | Weight         |
|  | Length (X)<br>mm (in.) | Width (Y)<br>mm (in.) | Height | Min <sup>1</sup><br>mm (in.) | Max<br>mm (in.) | Min <sup>1</sup><br>mm (in.) | Max<br>mm (in.) | Max<br>kwh<br>(amp hr) | Max<br>kg (lb) |
| T5Z and T5Z <sup>AC</sup>                  | 794 (31.25)            | 340 (13.4)            | Open   | 648 (25.5)                   | 785 (30.9)      | 218 (8.6)                    | 330 (13)        | 11.9 (510)             | 469 (1035)     |
| T7Z and T7Z <sup>AC</sup>                  | 794 (31.25)            | 340 (13.4)            | Open   | 648 (25.5)                   | 785 (30.9)      | 218 (8.6)                    | 330 (13)        | 17.6 (750)             | 658 (1450)     |
| C60Z and C60Z <sup>AC</sup>                | 794 (31.25)            | 340 (13.4)            | Open   | 663 (26.1)                   | 785 (30.9)      | 325 (12.8)                   | 330 (13)        | 11.9 (510)             | 469 (1035)     |
| C80Z and C80Z <sup>AC</sup>                | 794 (31.25)            | 340 (13.4)            | Open   | 663 (26.1)                   | 785 (30.9)      | 325 (12.8)                   | 330 (13)        | 17.6 (750)             | 658 (1450)     |

<sup>1</sup> Minimum battery dimensions allowed with standard battery spacer group.  
<sup>2</sup> 6 hour rate.  
**NOTE:** 24 Volt DC battery only.  
 Covered batteries required.  
 Battery connector type is 175 Amp, Red (Gray is optional).  
 Cable lead position B.  
 20-Inch cable length.  
 Maximum cable gauge of 1/0.

