

**SERVICE REPAIR**

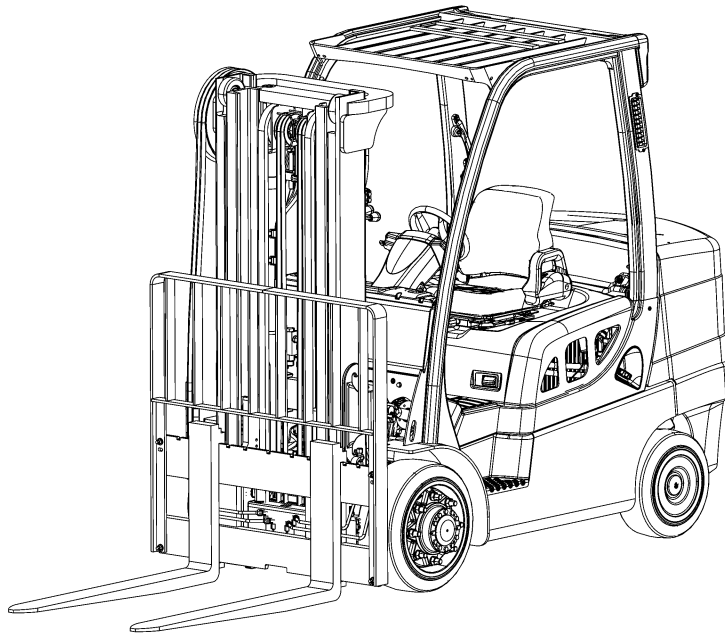
**MANUAL**

Hyster N005 (H80FT, H90FT, H100FT, H110FT, H120FT)  
Forklift Service Repair Manual

***HYSTER***

# **PERIODIC MAINTENANCE**

**S80, 100, 120FT; S80, 100FTBCS; S120FTS;  
S120FTPRS [G004];  
H80, 90, 100, 110, 120FT [N005, P005]**



# ***HYSTER***

# SAFETY PRECAUTIONS

## MAINTENANCE AND REPAIR

- The Service Manuals are updated on a regular basis, but may not reflect recent design changes to the product. Updated technical service information may be available from your local authorized Hyster® dealer. Service Manuals provide general guidelines for maintenance and service and are intended for use by trained and experienced technicians. Failure to properly maintain equipment or to follow instructions contained in the Service Manual could result in damage to the products, personal injury, property damage or death.
- When lifting parts or assemblies, make sure all slings, chains, or cables are correctly fastened, and that the load being lifted is balanced. Make sure the crane, cables, and chains have the capacity to support the weight of the load.
- Do not lift heavy parts by hand, use a lifting mechanism.
- Wear safety glasses.
- DISCONNECT THE BATTERY CONNECTOR before doing any maintenance or repair on electric lift trucks. Disconnect the battery ground cable on internal combustion lift trucks.
- Always use correct blocks to prevent the unit from rolling or falling. See HOW TO PUT THE LIFT TRUCK ON BLOCKS in the **Operating Manual** or the **Periodic Maintenance** section.
- Keep the unit clean and the working area clean and orderly.
- Use the correct tools for the job.
- Keep the tools clean and in good condition.
- Always use **HYSTER APPROVED** parts when making repairs. Replacement parts must meet or exceed the specifications of the original equipment manufacturer.
- Make sure all nuts, bolts, snap rings, and other fastening devices are removed before using force to remove parts.
- Always fasten a DO NOT OPERATE tag to the controls of the unit when making repairs, or if the unit needs repairs.
- Be sure to follow the **WARNING** and **CAUTION** notes in the instructions.
- Gasoline, Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), and Diesel fuel are flammable. Be sure to follow the necessary safety precautions when handling these fuels and when working on these fuel systems.
- Batteries generate flammable gas when they are being charged. Keep fire and sparks away from the area. Make sure the area is well ventilated.

**NOTE:** The following symbols and words indicate safety information in this manual:



### **WARNING**

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



### **CAUTION**

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

On the lift truck, the **WARNING** symbol and word are on orange background. The **CAUTION** symbol and word are on yellow background.

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This section is for the following models:

(S80, 100, 120FT; S80, 100FTBCS; S120FTS; S120FTPRS) [G004];  
 (H80, 90, 100, 110, 120FT) [N005, P005]



## General



### WARNING

**DO NOT** make repairs or adjustments unless you have both authorization and training. Repairs and adjustments that are not correct can make a dangerous operating condition.



### WARNING

**DO NOT** operate a lift truck that needs repairs. Report the need for repairs immediately. If repair is necessary, put a **DO NOT OPERATE** tag in the operator's area. Remove the key from the key switch.



### CAUTION

**Disposal of lubricants and fluids must meet local environmental regulations.**

This section contains a **Maintenance Schedule** and instructions for maintenance and inspection.

The **Maintenance Schedule** has time intervals for inspection, lubrication, and maintenance of your lift truck. The service intervals are provided in both operating hours recorded on the lift truck hourmeter and in calendar time. The recommendation is to use the interval that comes first.

The recommendations for the time intervals provided is for eight hours of operation per day. The time intervals must be decreased from the recommendations in the **Maintenance Schedule** for the following conditions:

- The lift truck is used more than eight hours per day.
- The lift truck must work in dirty operating conditions.
- Poor ground conditions.
- Intensive usage at high performance levels or other abnormal conditions will require more frequent servicing.

Your dealer for Hyster lift trucks has the equipment and trained service personnel to do a complete program of inspection, lubrication, and maintenance. A regular program of inspection, lubrication, and maintenance will help your lift truck provide more efficient performance and operate for a longer period of time.

Some users have service personnel and equipment to do the inspection, lubrication, and maintenance shown in the **Maintenance Schedule**. Service manuals are available from your dealer for Hyster lift trucks to help users who do their own maintenance.

## SERIAL NUMBER DATA

The serial number for the lift truck is on the Nameplate. It is also on the right side of the frame, under the floor plate.

## HOW TO MOVE DISABLED LIFT TRUCK

### How to Tow Lift Truck



#### WARNING

Use extra caution when towing a lift truck if any of the following conditions exist:

- Brakes do not operate correctly.
- Steering does not operate correctly.
- Tires are damaged.
- Traction conditions are bad.
- The lift truck must be towed on a slope.

If the engine cannot run, there is no power available for the hydraulic steering system and the service brakes. This condition can make the lift truck difficult to steer and stop. If the lift truck uses power from the engine to help apply the brakes, the application of the brakes will be more difficult. Poor traction can cause the disabled lift truck or towing vehicle to slide. A slope will also make the lift truck more difficult to stop.

Never lift and move a disabled lift truck unless the disabled lift truck **MUST** be moved and cannot be towed. A lift truck used to move a disabled lift truck **MUST** have a capacity rating equal to or greater than the weight of the disabled lift truck. The capacity of the lift truck used to move a disabled lift truck must have a load center equal to half the width of the disabled lift truck. See the Nameplate of the disabled lift truck for the approximate total weight. The forks must extend the full width of the disabled lift truck. Put the weight center of the disabled lift truck on load center of the forks. Be careful to not damage the underside of the lift truck.

1. The towed lift truck must have an operator.
2. Tow truck slowly.

3. Using a lift truck or a lifting device that could be attached to the mast (I.E. come-a-long), raise carriage and forks approximately 30 cm (12 in.) from surface. Install chain around a mast crossmember and carriage to prevent carriage and mast channels from moving.
4. If another lift truck is used to tow the disabled lift truck, that lift truck must have an equal or larger capacity than the disabled lift truck. Install approximately 1/2 of a capacity load on forks of lift truck that is being used to tow disabled lift truck. This 1/2 capacity load will increase traction of lift truck. Keep load as low as possible.

## HOW TO PUT LIFT TRUCK ON BLOCKS

### How to Raise Drive Tires



#### WARNING

The lift truck must be put on blocks for some types of maintenance and repair. The removal of the following assemblies will cause large changes in the center of gravity: mast, drive axle, engine, transmission, and counterweight. When the lift truck is put on blocks, put additional blocks in the following positions to maintain stability:

- Before removing the mast and drive axle, put blocks under the counterweight so the lift truck cannot fall backward.
- Before removing the counterweight, put blocks under the mast assembly so the lift truck cannot fall forward.

The surface must be solid, even, and level when the lift truck is put on blocks. Make sure any blocks used to support the lift truck are solid, one-piece units.

**CAUTION**

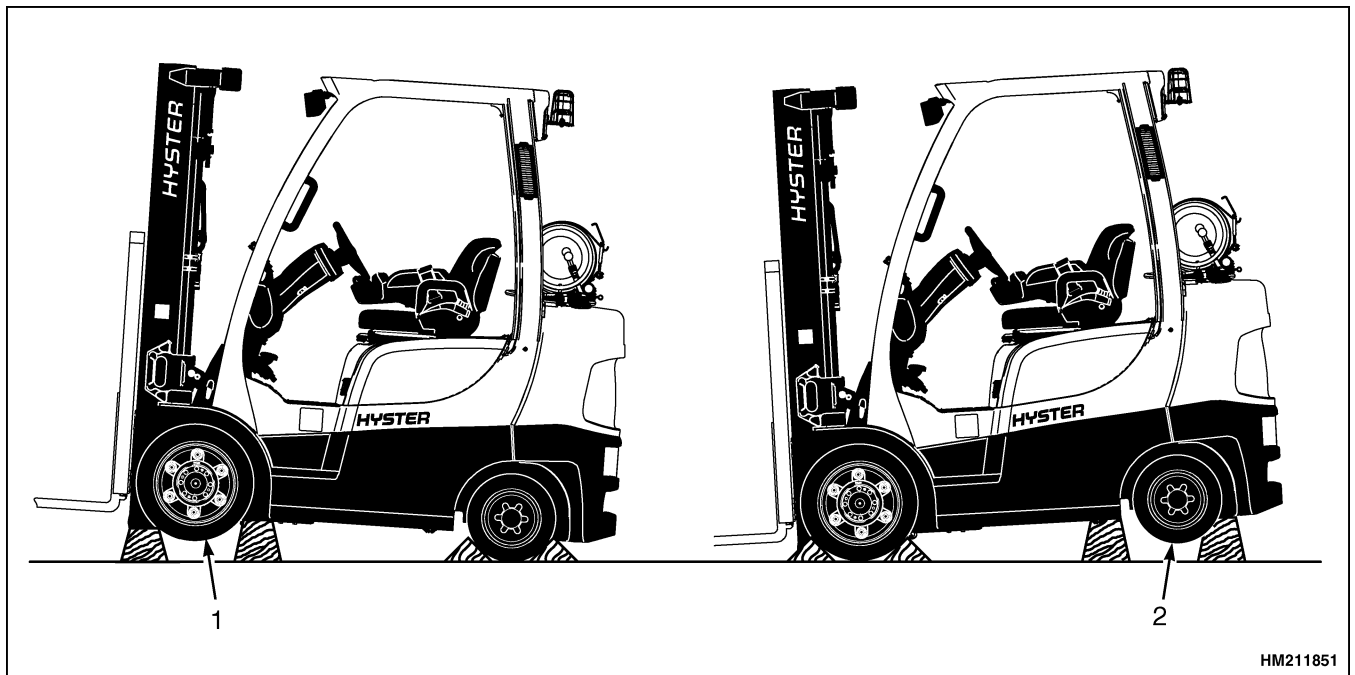
These lift trucks are equipped with cowl lifting eyes. The cowl lifting eyes are to be used to lift the front of the lift truck only. Lifting more than the front of the lift truck with the cowl lifting eyes will damage the cowl section.

1. Put blocks on each side (front and back) of steering tires to prevent movement of lift truck. See Figure 1.
2. Put mast in vertical position. Put a block under each outer mast channel.
3. Tilt mast fully forward until drive tires are raised from surface.
4. Put additional blocks under frame behind drive tires.
5. If hydraulic system will not operate, use a hydraulic jack under the side of the frame near the front. Make sure jack has a capacity equal to at least half the weight of the lift truck. See Nameplate.

**How to Raise Steering Tires**

**NOTE:** Some lift trucks are equipped with lifting eyes for the purpose of lifting the entire lift truck. If lift truck is equipped with these type of lifting eyes, the lift truck can be lifted and blocks installed.

1. Apply parking brake. Put blocks on both sides (front and back) of drive tires to prevent movement of lift truck. See Figure 1.
2. Use hydraulic jack to raise steering tires. Make sure jack has a capacity of at least 2/3 of total weight of lift truck as shown on the Nameplate.
3. Put jack under steering axle or frame to raise lift truck. Put blocks under frame to support lift truck.



1. DRIVE TIRES

2. STEERING TIRES

**Figure 1. Put Lift Truck on Blocks**

## HOW TO CLEAN A LIFT TRUCK



### WARNING

Engine, exhaust system components and other components are hot to the touch. Be sure lift truck components are cool before starting inspection and cleaning, or personal injury may occur.



### WARNING

Compressed air can move particles so that they cause injury to the user or to other personnel. Make sure that the path of the compressed air is away from all personnel. Wear protective goggles or a face shield to prevent injury to the eyes.



### CAUTION

Units may be washed with a non-heated pressure washer. Steam cleaning is not recommended in most instances, as condensation may form in electrical components causing damage or erratic behavior.

**NOTE:** Lift trucks used in paper applications may need cleaning beyond what is described here. Please refer to Paper Application section in the applicable **Operating Manual** and to available Service Gram/Bulletin for more detail.

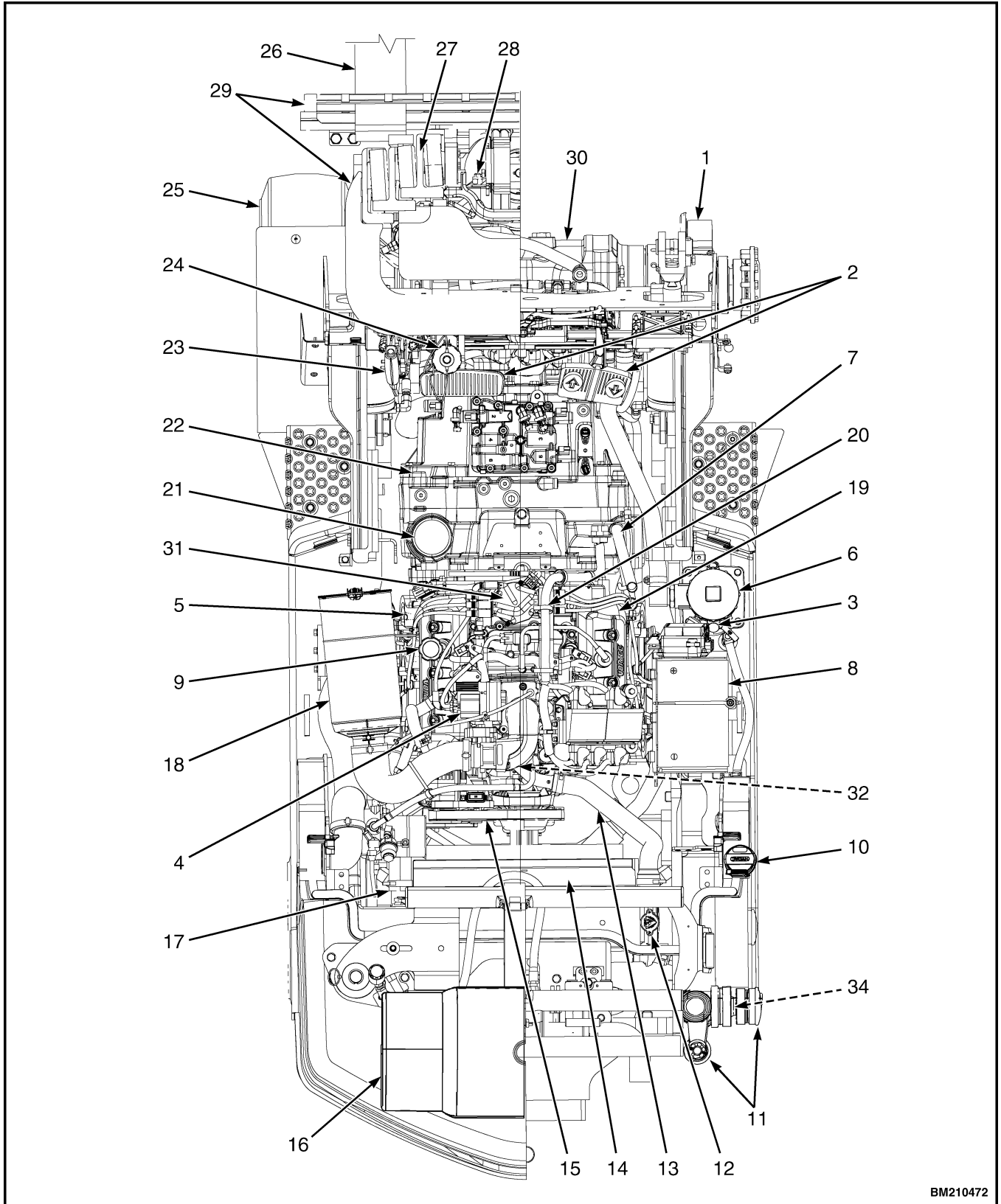
If it becomes necessary to clean the fork lift, follow the guidelines listed below.

1. Assure truck components are cool before starting the cleaning procedure.
2. Disconnect the battery. If an electric truck, remove the traction battery.
3. Remove accumulated debris using a compressed air line and nozzle.
4. Lightly spray a non-corrosive cleaning agent onto the areas to be cleaned. This will help loosen grime, so close contact direct spraying will not be necessary.
5. Be sure to avoid directing the spray into electrical panel compartment. Ensure overspray does not come in contact with electrical components; do not spray water directly at electrical components, wiring connectors or electrical enclosures. Even sealed connectors may allow water egress under pressure or if connector is damaged.
6. Avoid spraying in areas containing electrical components such as:
  - Floor Plates
  - Battery Compartment
  - Dash/cowl assembly
  - Armrests with electrical components
7. Clean the battery compartment by using a clean cloth to wash the battery with water. Dry with compressed air. Care should be taken to keep moisture at a minimum as some units have a traction or hydraulic motor directly below the battery compartment.
8. **DO NOT** pressure wash the battery. Do not use hot water. For cleaning traction batteries, refer to the Battery section of the **Service Manual**.
9. **DO NOT** pressure wash lift chains, sheaves or load rollers in the mast assembly. Refer to the Chains, Sheaves and Load Rollers maintenance section in the **Service Manual** for proper cleaning procedures.
10. After cleaning, immediately start and run the lift truck to dry out components.

## Maintenance Schedule

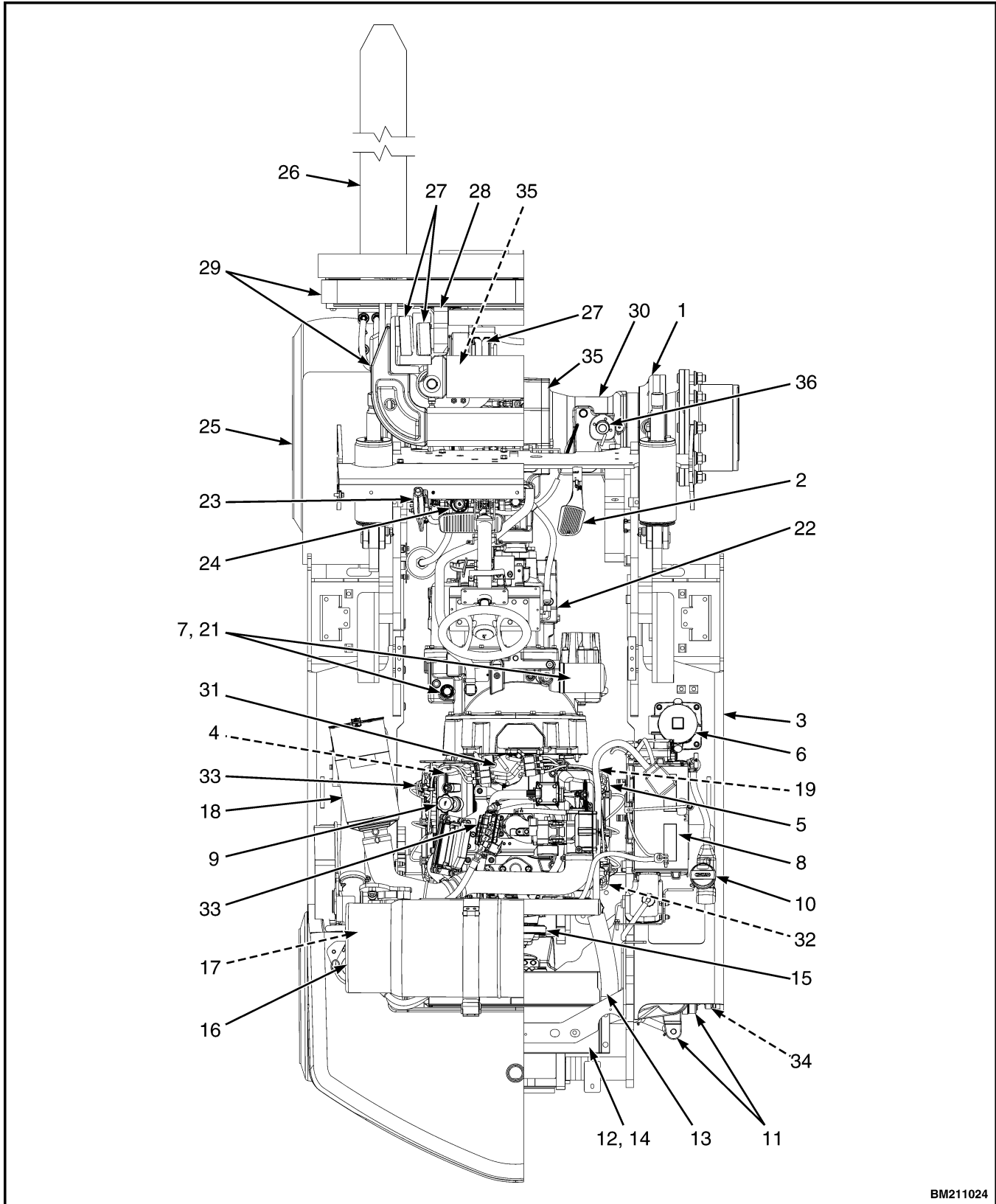
**NOTE:** The lift trucks shown in Figure 2 and Figure 3, represent all lift trucks covered in this manual that are equipped with a GM 4.3L LPG engine.

**NOTE:** The 250-hour, 500-hour, and 1000-hour/6-month maintenance services are performed either at the specified hours or at 6 months whichever occurs first.



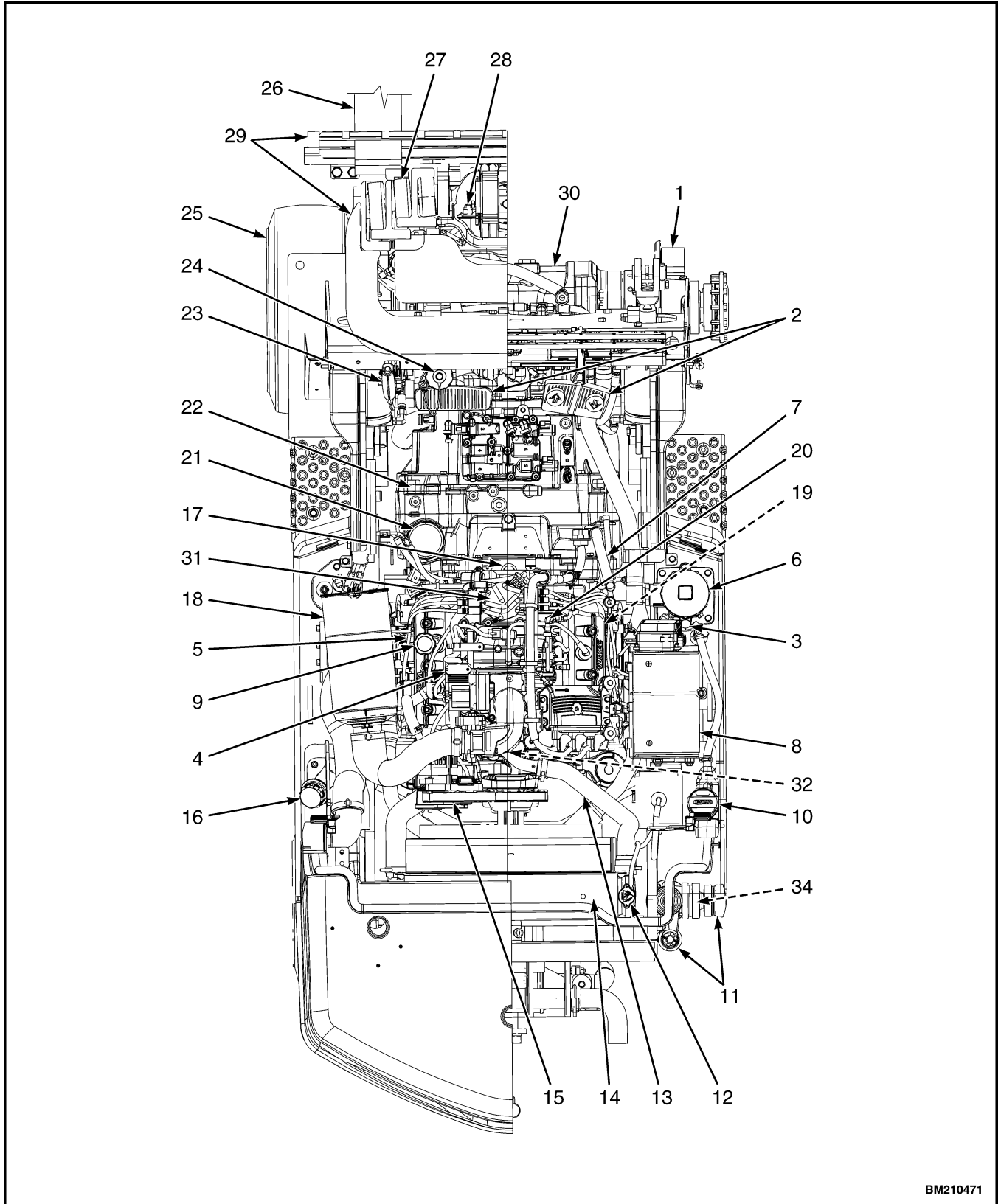
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Figure 2. GM 4.3L LPG Trucks With GFI Installed



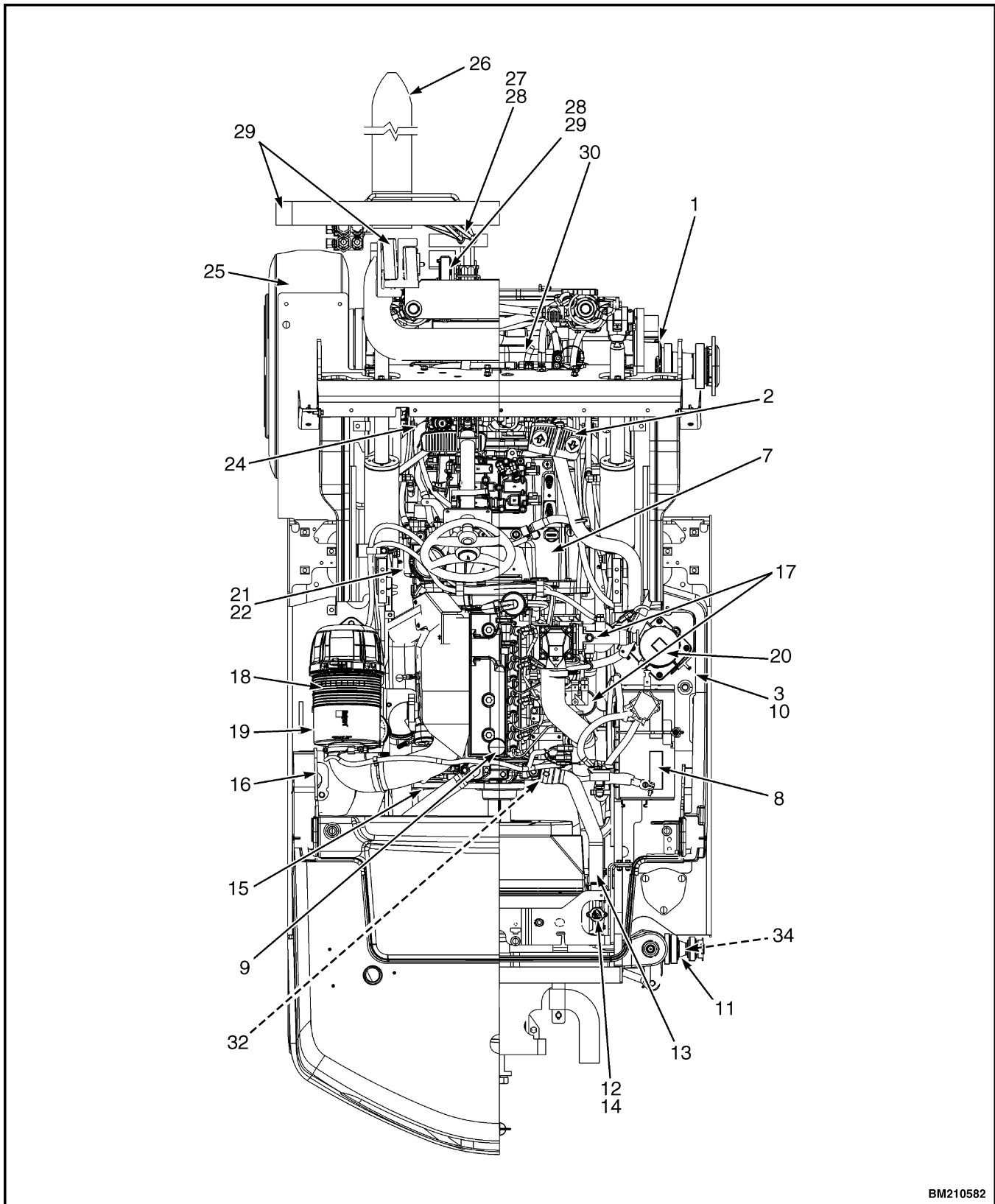
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Figure 3. GM 4.3L LPG Trucks With PSI Installed



BM210471

**Figure 4. GM 4.3L Gasoline Trucks With GFI Installed for Lift Truck Models S80, 100, 120FT; S80, 100FTBCS; S120FTS; S120FTPRS (G004)**



BM210582

Figure 5. Cummins QSB 3.3L Diesel for Lift Truck Models H80, 90, 100, 110, 120FT (P005)



Table 1. Maintenance Schedule

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
25	Tires and Wheels	X						Check Condition	See Nameplate
	Safety Labels	X						Replace as Necessary	See <b>Parts Manual</b>
28, 29	Mast, Carriage, Header Hoses, Lift Chains, Attachment	X						Check Condition and Lubrication	See <b>Parts Manual</b>
	Seat Belt, Hip Restraints, and Seat Rails	X						Check Condition and Operation	
	Hood and Seat Latches	X						Check Condition and Operation	
	Engine Compartment	X						Remove Combustible Materials See <b>NOTE 5.</b>	
	Paper Application: Engine Compartment, Truck Components, Exhaust Wraps, Radiator, Radiator Screen if equipped, Belly Pan if equipped	X						Check Condition. Clean as Required, Replace as Required See <b>NOTE 8.</b>	
	Check for Leaks - Fuel, Oil, Water	X						Check for Leaks See <b>NOTE 1.</b>	
	Hydraulic Hoses	X						Check Condition	See <b>Parts Manual</b>
13	Coolant Hoses	X						Check Condition	See <b>Parts Manual</b>
16	Fuel Tank (LPG)	CIL						15.1 - 20.4 kg (33.5 - 45.0 lb) Full	LPG - HD 5, HD 10
16	Fuel Tank GM 4.3L (Gasoline) S80, 100, 120FT; S80, 100FTBCS; S120FTS; S120FTPRS (G004)	CIL						44.7 liter (11.8 gal)	86 Octane - Gasoline Minimum
X=Check C=Change L=Lubricate CIL=Check Indicator Light during operation									

**Table 1. Maintenance Schedule (Continued)**

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
16	Fuel Tank (Short Wheel Base) GM 4.3L (Gasoline) H80, 90, 100, 110, 120FT (N005, P005)	CIL						79 liter (20.8 gal)	86 Octane Minimum
16	Fuel Tank (Long Wheel Base) GM 4.3L (Gasoline) H80, 90, 100, 110, 120FT (N005, P005)	CIL						100.3 liter (26.5 gal)	86 Octane Minimum
16	Fuel Tank (Short Wheel Base) Cummins 4.5L and QSB 3.3L (Diesel) H80, 90, 100, 110, 120FT (N005, P005)	CIL						79 liter (20.8 gal)	Diesel No. 2
16	Fuel Tank (Long Wheel Base) Cummins 4.5L and QSB 3.3L (Diesel) H80, 90, 100, 110, 120FT (N005, P005)	CIL						100.3 liter (26.5 gal)	Diesel No. 2
	Horn, Lights, Alarms, Fuses, and Relays	X						Check Operation	
1	Service Brakes	X						Check Operation	
23	Parking Brake	X						Check Operation	
	Steering Controls and Steering Column Gas Cylinder	X						Check Condition and Operation	
X=Check C=Change L=Lubricate CIL=Check Indicator Light during operation									

**Table 1. Maintenance Schedule (Continued)**

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
22	Transmission	X						Check for Leaks	John Deere JDM J20C
22	Transmission	X						Check Operation	
3	Hydraulic Oil GM 4.3L [S80, 100, 120FT]; S80, 100FTBCS, S120FTS; S120FTPRS (G004)	X		X			C	39.4 liter (41.6 qt) See <b>NOTE 2</b> , <b>NOTE 3</b> and <b>NOTE 17</b> .	ISO VG 46 Hydraulic Oil -15°C (5°F) and Above
3	Hydraulic Oil (Short Wheel Base) H80, 90, 100, 110, 120FT (N005, P005)	X		X			C	62.0 liter (65.5 qt) See <b>NOTE 2</b> , <b>NOTE 3</b> , and <b>NOTE 17</b> .	ISO VG 46 Hydraulic Oil -15°C (5°F) and Above
3	Hydraulic Oil (Long Wheel Base) H80, 90, 100, 110, 120FT (N005, P005)	X		X			C	78.0 liter (82.4 qt) See <b>NOTE 2</b> , <b>NOTE 3</b> and <b>NOTE 17</b> .	ISO VG 46 Hydraulic Oil -15°C (5°F) and Above
6	Hydraulic Oil Filter					C		1 Filter . See <b>NOTE 17</b> .	See <b>Parts Manual</b>
10	Hydraulic Tank Breather			X		C		Inspect and Replace as Required See <b>NOTE 5</b> .	See <b>Parts Manual</b>
8	Battery and Cable Terminals			X				Clean	

X=Check C=Change L=Lubricate CIL=Check Indicator Light during operation

Table 1. Maintenance Schedule (Continued)

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
9	Engine Oil GM 4.3L Engine (Gasoline/ LPG)	X CIL	C					4.7 liter (5.0 qt) See <b>NOTE 4</b> and <b>NOTE 5</b> .	-7°C (20°F) and Below SAE 5W-20 16°C (60°F) and Below SAE 5W-30 -18°C (0°F) and Above SAE 10W-30 API SM ILSAC GF4 SAE J2362
19	Engine Oil Filter GM 4.3L Engine		C					1 Filter See <b>NOTE 4</b> and <b>NOTE 5</b> .	See <b>Parts Manual</b>
9	Engine Oil Cummins 4.5L Engine (Diesel)	X CIL		C				13.0 liter (13.7 qt) See <b>NOTE 4</b> and <b>NOTE 5</b> .	0°C (32°F) and Below SAE 0W-30 -25 to 20°C (-13 to 68°F) SAE 5W-30 -20 to 20°C (-4 to 68°F) SAE 10-30 -15°C (5°F) and Above SAE 5W-40 or 15W-40 API CH-4 or CI-4
9	Engine Oil Cummins QSB 3.3L Engine (Diesel)	X CIL		C				7.5 liter (8 qt) See <b>NOTE 4</b> and <b>NOTE 5</b> .	0°C (32°F) and Below SAE 0W-30 -25 to 20°C (-13 to 68°F) SAE 5W-30 -20 to 20°C (-4 to 68°F) SAE 10-30 -15°C (5°F) and Above SAE 5W-40 or 15W-40 API CH-4 or CI-4

X=Check C=Change L=Lubricate CIL=Check Indicator Light during operation

Table 1. Maintenance Schedule (Continued)

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
19	Engine Oil Filter Cummins 4.5L and QSB 3.3L (Diesel)			C				1 Filter See NOTE 4 and NOTE 5.	See <b>Parts Manual</b>
18	Air Filter (with premium monitoring)	CIL				C		1 Filter See NOTE 5, NOTE 6, and NOTE 12.	See <b>Parts Manual</b>
18	Air Filter	X				C		1 Filter See NOTE 5, NOTE 6, and NOTE 12.	See <b>Parts Manual</b>
	Engine Oil Pressure	CIL						Check Oil Pressure	GM Engine 207 to 380 kPa (30 to 55 psi) Cummins 4.5L Diesel Engine at High Idle 207 kPa (30 psi) at Low Idle 69 kPa (10 psi) Cummins QSB 3.3L Diesel Engine
15	Drive Belt GM Engine		X					Check for Wear and Damage. No Adjustment Needed. See NOTE 5.	
15	Drive Belt Cummins 4.5L and QSB 3.3L (Diesel)			X				Check for Wear and Damage. No Adjustment Needed. See NOTE 5.	
	LPG Regulator GM 4.3L Engine With GFI Installed		X					Drain Tar See NOTE 5.	
33	LPG Converter 4.3L LPG Engine With PSI Installed		X					Drain Tar See NOTE 5.	

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Table 1. Maintenance Schedule (Continued)

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
	Engine Idle Speed GM 4.3L (Gasoline/ LPG)		X						750 ±25 rpm
	Engine Governed Speed GM 4.3L (Gasoline/ LPG)		X						2400 ±25 rpm
	Engine Idle Speed <b>Cold Engine</b> Cummins 4.5L (Diesel)			X				Coolant Temperature Less than 77°C (170°F)	770 ±50 rpm
	Engine Idle Speed <b>Hot Engine</b> Cummins 4.5L (Diesel)			X				Coolant Temperature Greater than 77°C (170°F)	800 ±50 rpm
	Engine Governed Speed (No Load) Cummins 4.5L Diesel			X					2250 ±50 rpm
	PCV Valve GM 4.3L Engine with GFI Installed			X				Replace as Necessary See <b>NOTE 14.</b>	See <b>Parts Manual</b>
	Engine Idle Speed <b>Cold Engine</b> Cummins QSB 3.3L (Diesel)			X				Coolant Temperature Less than 30°C (86°F)	1000 ±25 rpm
	Engine Idle Speed <b>Hot Engine</b> Cummins QSB 3.3L (Diesel)			X				Coolant Temperature Greater than 30°C (86°F)	800 ±25 rpm

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Table 1. Maintenance Schedule (Continued)

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
	Engine Governed Speed  Cummins QSB 3.3L (Diesel)			X					2230 ±25 rpm
	Oxygen Sensor GM 4.3L Engine With GFI Installed					X CIL		Replace as Necessary	
4	Valve Adjustment GM 4.3L Engine							Not Adjustable	
4	Valve Adjustment  Cummins 4.5L Diesel Engines						X	Adjust as Required	Intake 0.254 mm (0.010 in.) Cold Exhaust 0.508 mm (0.020 in.) Cold
4	Valve Adjustment  Cummins QSB 3.3L Diesel Engines					X		Adjust as Required See <b>NOTE 13.</b>	Intake 0.35 mm (0.014 in.) Cold Exhaust 0.50 mm (0.02 in.) Cold
17	Fuel Filter, LPG (GM)				C			1 Filter	See <b>Parts Manual</b>
17	Fuel Filter  Gasoline (GM)					C		1 Filter	See <b>Parts Manual</b>
17	Fuel Water Separator Filter  Cummins 4.5L and QSB 3.3L Diesel Engine	CIL		C				1 Filter Drain Water from Filter as Required	See <b>Parts Manual</b>

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**Table 1. Maintenance Schedule (Continued)**

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
17	In-Line Fuel Filter Cummins 4.5L Diesel Engine				C			1 Filter	See <b>Parts Manual</b>
17	Final Fuel Filter Cummins QSB 3.3L Diesel Engine			C				1 Filter	See <b>Parts Manual</b>
20	Fuel Injectors GM 4.3L Gas					X		Check and Replace If Required 6 Injectors	
20	Fuel Injectors GM 4.3L LPG With GFI Installed					X		Check and Replace If Required 6 Injectors	
5	Spark Plugs GM 4.3L Engine				C			Check Plug Wires 6 Plugs	See <b>NOTE 9.</b>
12, 14	Cooling System GM 4.3L Engine	X CIL				C		15.1 liter (15.9 qt)	See <b>NOTE 15.</b>
12, 14	Cooling System Cummins 4.5L Diesel Engine	X CIL				C		13.5 liter (14.2 qt)	See <b>NOTE 15.</b>
12, 14	Cooling System Cummins QSB 3.3L Diesel Engine	X CIL				C		10.4 liter (11 qt)	See <b>NOTE 15.</b>
	Clean Debris From Radiator Core			X				See <b>NOTE 5.</b>	
7	Transmission Oil <b>Dry Brake</b>			X		C		20 liter (21 qt)	John Deere JDM J20C
21	Transmission Oil Filter and Breather					C		1 Filter 1 Breather See <b>NOTE 4.</b>	See <b>Parts Manual</b>
26	Forks	X		X		X		Check Condition	

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Table 1. Maintenance Schedule (Continued)

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
26	Fork Latches			L				Lubricate as Necessary	Multipurpose Grease See NOTE 7.
	Lift System, Operate	X						Check Operation	
27	Mast  Sliding Surfaces and Load Roller Surfaces			L				Lubricate as Required See NOTE 10 and NOTE 11.	Multipurpose Grease See NOTE 7.
27	Header Hoses			X				Check Condition	
28	Lift Chains	X						Check Condition/ Lube if Necessary. See NOTE 11.	SAE 30W Engine Oil
28	Lift Chains			L	L, X			Check for Wear. Lube as Required.	SAE 30W Engine Oil
	Mast  Pivots			L				2 Fittings	Multipurpose Grease See NOTE 7.
	Mast  Integral Sideshift Carriage Sliding Surfaces	X		L	X			Lube as Required. 8 Fittings 4 Bearing Strips Check Bearing Strips for Wear.	Multipurpose Grease See NOTE 7 2.0 mm (0.08 in.) Minimum Thickness.
	Tilt Cylinder Ends			L				4 Fittings	Multipurpose Grease See NOTE 7
	Brake Master Cylinder Rod End Pin			L					SAE 10W-30 API SM ILSAC GF4 SAE J2362
	Manual Hydraulic Hand Levers			L					SAE 10W-30 API SM ILSAC GF4 SAE J2362
24	Brake Oil (Master Cylinder)	CIL		X		C		0.35 liter (0.74 pt)	Dexron III from Sealed Container
X=Check C=Change L=Lubricate CIL=Check Indicator Light during operation									

Table 1. Maintenance Schedule (Continued)

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
11	Steering Axle Spindle Bearings				L			4 Fittings	Multipurpose Grease See NOTE 7.
11	Steering Axle			L				2 Fittings	Multipurpose Grease See NOTE 7.
11	Steering Axle			L				4 Fittings	Multipurpose Grease See NOTE 7.
34	Wheel Bearings Steer Wheels					L		Check Grease.	Multipurpose Grease See NOTE 7.
2	Pedals, Levers, Seat Rails, Cables, Hinges, Linkages, Hood Latch				L			Lubricate as Necessary	Use Silicone Spray Hyster Part No. 328388
1	Service Brakes (Dry Brake)					X		Check Lining Thickness	1.0 mm (0.040 in.) Minimum
23	Parking Brake Adjustment			X				Adjust as Necessary.	Must Hold a Full Capacity Load on a 15% Grade.
23	Parking Brake				L			Lubricate as Necessary	Use Silicone Spray (Hyster Part Number 328388)
30	Differential and Drive Axle Oil (Dry Brake)			X		C		6.0 liter (6.3 qt)	SAE 80W-90 or 85W-140
7/30	Transmission and Planetary Carrier Housing Oil S80FT, FTBCS (G004)			X		C		28.8 liter (30.4 qt)	John Deere JDM J20C
7/30	Transmission and Planetary Carrier Housing Oil S100FT, FTBCS S120FT, FTS, FTPRS (G004)			X		C		29.8 liter (31.4 qt)	John Deere JDM J20C
7/30	Transmission and Planetary Carrier Housing Oil H80, 90, 100, 110, 120FT (N005, P005)			X		C		31.3 liter (33.0 qt)	John Deere JDM J20C

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Table 1. Maintenance Schedule (Continued)

Item No.	Item	8 hr/ 1 day	250 hr/ 6 mo	500 hr/ 6 mo	1000 hr/ 6 mo	2000 hr/ 1 yr	4000 hr/ 2 yr	Procedure or Quantity	Specification
35	Wet Brake Center Section Oil S80, 100, 120FT; S80, 100FTBCS; S120FTS; S120FTPRS (G004)			X		C		2.0 liter (2.1 qt)	SAE 80W/90
35	Wet Brake Center Section Oil H80, 90, 100, 110, 120FT (N005, P005)			X		C		2.0 liter (2.1 qt)	SAE 80W-90
36	Parking Brake Levers (Wet Brake Axle)				X			Check and Lubricate as Necessary	Normal Operating Environment: Spray Lubricant (Hyster P/N 4066494) Heavy Duty or Contaminated Environment: Multipurpose Grease See NOTE 7.
	Inspect Engine Electrical System, Connectors				X				
	Inspect Engine Vacuum, Fuel Lines, and Fittings					X			
	Inspect Lock-Off for Leaks, and Ensure Lock-Off Closing					X			
	Test LPG/GAS Regulator Pressure - GFI equipped engines					X			
	Check Air Induction System for Leaks					X			
X=Check C=Change L=Lubricate CIL=Check Indicator Light during operation									