SERVICE REPAIR

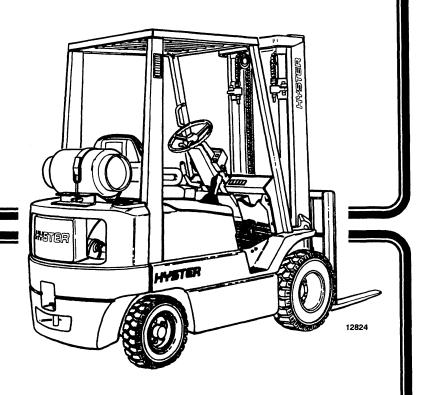
MANUAL

Hyster D001 (H25XM H30XM H35XM H40XMS) Forklift



PERIODIC MAINTENANCE

H/S25-40XM/XMS (H/S1.25-2.00XM/XMS)



HYSTER

PART NO. 1459331 8000 SRM 531

SAFETY PRECAUTIONS MAINTENANCE AND REPAIR

- When lifting parts or assemblies, make sure that all slings, chains or cables
 are correctly fastened and that the load being lifted is balanced. Make sure
 that 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 and working area clean and in order.
- 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 that all nuts, bolts, snap rings and other fastening devices are removed before using force to remove parts.
- Always fasten a DO NOT OPERATE sign to the controls of the unit when making repairs or if the unit needs repairs.
- Make sure you follow the WARNING and CAUTION notes in the instructions.
- Gasoline, Liquid Petroleum Gas (LPG), and Diesel are flammable fuels.
 Make sure that you 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 has ventilation.

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This section is for the following models: H/S25-35XM, H/S40XMS (H/S1.25-2.00XM/XMS)

NOTES

INTRODUCTION

GENERAL

This section contains a MAINTENANCE SCHEDULE and the instructions for maintenance and inspection.

The MAINTENANCE SCHEDULE has time intervals for inspection, lubrication and maintenance for your lift truck. The service intervals are given in both operating hours recorded on the lift truck hour meter, and in calendar time. Use the interval that comes first.

The recommendation for the time intervals are for eight hours of operation per day. The time intervals must be decreased from the recommendations in the MAINTE-NANCE SCHEDULE for the following conditions:

- a. If the lift truck is used more than eight hours per day.
- b. If the lift truck must work in dirty operating conditions.

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 give 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.

A 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.

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.

Serial Number

The serial number for the lift truck is on the nameplate. It is also on the rear of the base frame (two lines) in front of the steering tire, on the right-hand side.

HOW TO MOVE A DISABLED LIFT TRUCK

A WARNING

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

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

If the engine cannot run, there is no power available for the hydraulic steering system. This condition can make the lift truck difficult to steer. 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 under side of the lift truck.

How To Tow The Lift Truck

- 1. The towed lift truck must have an operator.
- 2. Tow the lift truck slowly.
- 3. Raise the carriage and forks approximately 30 cm. (12 inches) from the surface. Install a chain to prevent the 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 the forks of the lift truck that is being used to tow the disabled lift truck. This $^{1}/_{2}$ capacity load will increase the traction of the towing lift truck. Keep the load as low as possible.

5. Use a towing link made of steel that fastens to the tow pins in the counterweights of both lift trucks.

HOW TO PUT A LIFT TRUCK ON BLOCKS

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 and transmission, and the counterweight. When the lift truck is put on blocks, put additional blocks in the following positions to maintain stability:

- a. Before removing the mast and drive axle, put blocks under the counterweight so that the lift truck can not fall backward.
- b. Before removing the counterweight, put blocks under the mast assembly so that the lift truck can not fall forward.

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

NOTE: Some lift trucks have lifting eyes. These lifting eyes can be used to raise the lift truck so that blocks can be installed.

How To Raise The Drive Tires (See FIGURE 1.)

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

How To Raise The Steering Tires (See FIGURE 1.)

- 1. Apply the parking brake. Put blocks on both sides (front and back) of the drive tires to prevent movement of the lift truck.
- 2. Use a hydraulic jack to raise the steering tires. Make sure that the jack has a capacity of at least $\frac{2}{3}$ of the total weight of the lift truck as shown on the nameplate.
- 3. Put the jack under the steering axle or frame to raise the lift truck. Put blocks under the frame to support the lift truck.

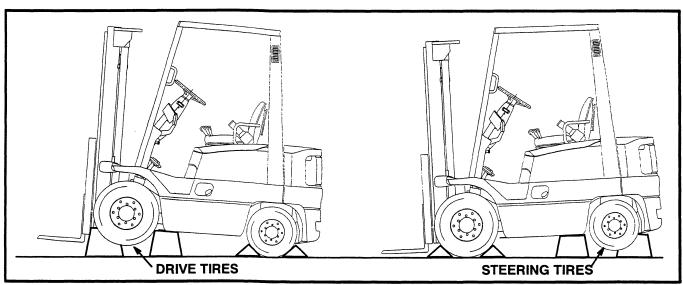


FIGURE 1. PUT A LIFT TRUCK ON BLOCKS

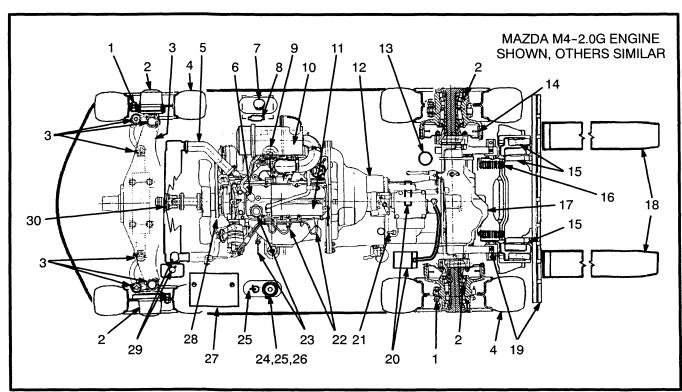


FIGURE 2. MAINTENANCE AND LUBRICATION POINTS

TABLE 1. MAINTENANCE SCHEDULE (See FIGURE 2.)								
ITEM NO.	ITEM	8 hr/ Daily	250 hr/ 6 wk	1000 hr/ 6 mo	2000 hr/ 1 yr.	PROCEDURE OR QUANTITY	SPECIFICATION	
4	TIRES & TIRE PRESSURE	Х				See Nameplate		
16,19	MAST, CARRIAGE, LIFT CHAINS	Х				Check Condition	See Parts Manual	
18	FORKS	Х				Check Condition	See Parts Manual	
	SAFETY LABELS	Х				Install as Needed	See Parts Manual	
	SEAT BELT, HIP RESTRAINTS AND SEAT RAILS	CIL X				Fasten Seat Belt Check Condition	See Parts Manual	
	HOOD, SEAT & STEERING COLUMN LATCHES	×				Check Condition Check Operation	See Parts Manual See Operating Manual	
	CHECK FOR FUEL, OIL OR COOLANT LEAKS	×				Check for Leaks		
7	FUEL & TANK CONDITION Gasoline & Diesel (Pneumatic) Gasoline (Cushion) LPG	CIL X X X				Fuel Low 30 litre (7.9 gal) 26 litre (6.9 gal) 43.5litre(11.5gal)	85 Octane — Gasoline Diesel No. 2 LPG — HD-5	
5,29	COOLANT LEVEL & HOSES	CIL X				Coolant Low Check Condition	See Parts Manual	
28	DRIVE BELTS	X CIL				Check Condition Alternator Warning	See Parts Manual	
	HORN, GAUGES, LIGHTS, ALARMS	CIL				Check at Start & During Operation	See Operating Manual	
	STEERING SYSTEM	Х				Check Operation	See Operating Manual	
	X=Check C=Change	L=Lu	bricate	C	IL=Che	eck Indicator Light or ga	uge during operation	

ITEM NO.	ITEM	8 hr/ Daily	250 hr/ 6 wk	1000 hr/ 6 mo	2000 hr/ 1 yr.	PROCEDURE OR QUANTITY	SPECIFICATION
	CEDVICE BRAVES AND	Х				Check Operation	Replace shoes as necessary
14	SERVICE BRAKES AND PARKING BRAKE	X	١,			Check Operation	See sect. BRAKE SYSTEM
	THURSDIVILE	^	L			Lubricate Linkage	and Parts Manual
23	ENGINE OIL	XC CIL	С			See NOTE 1	API SE, MIL-L-46152 30°C (85°F) and up SAE 40;
	Mazda M4-1.5G (Gasoline and LPG)					3.7 litre (3.9 qt)	15-30°C (60-85°F) SAE 30; 0-15°C (32-60°F) SAE 20W;
	Mazda M4-2.0G (Gasoline and LPG)					4.3 litre (4.5 qt)	less than -10°C (15°F) SAE 10W
	Mazda M4-2.5D (Diesel)					7.4 litre (8.4 qt)	API CC, CC/SE 27°C (81°F) and up SAE 30; 1°C (34°F) SAE 20W-20; -18 to 1°C(-4 to 34°F) SAE 10W;
9	ENGINE OIL FILTER (All Engines)		С			1 each See NOTE 1	See Parts Manual
10	AIR FILTER	CIL	х	С		Clean or New See NOTE 2	See Parts Manual
	FUEL FILTER, DIESEL	CIL	×	С		1 each See NOTE 1	See Parts Manual
8	FUEL FILTER, GASOLINE & LPG	С		С		1 each See NOTE 1	See Parts Manual
12,20	TRANSMISSION	Х				Check Operation	
21	Pneumatic	CIL	X		C	9.2 litre (9.7 qt)	ATF Dextron II or equivalent
	Cushion	CIL	X		C	7.5 litre (7.9 qt)	
13	BRAKE FLUID	CIL	X			0.3 litre (0.6 pt)	SAE J-1703
25,26	HYDRAULIC SYSTEM						
	Pneumatic	Х			С	30 litre (7.9 gal)	-18°C (0°F) and Above
1	Cushion	X			С	19.7 litre (5.0 gal)	SAE 10W, API CC or CC/SE
29	COOLING SYSTEM	CIL			1	Level Low	
l	Mazda M4-1.5G	X			С	9.1 litre (2.4 gal)	
1	Mazda M4-2.0G					, , ,	50% Water with 50% Ethylene Glycol
İ	H25-40XM	X		1	C	12.0 litre (3.2 gal)	See NOTE 3
1	S25-40XM	X		1	C	10.8 litre (2.8 gal)	See NOTE 3
1	Mazda M4-2.5D	Х			С	13.8 litre (3.6 gal)	
			†	-		Check Level (U	nless Maintenance-Free Battery)
27	BATTERY ELECTROLYTE		x			NOTE:Alternator V	Varning Light can come ON or w a low voltage with a low electro-
24	HYDRAULIC TANK BREATHER		x			Clean or Install New	See Parts Manual

NOTE 1: Change at 1st 100 hrs. (hour meter) with NEW or rebuilt unit.

NOTE2: Very dirty conditions will require daily check and clean.

NOTE 3: Anti-freeze without boron is required for all engines with aluminium heads.

ITEM NO.	ITEM	8 hr/ Daily	250 hr/ 6 wk	1000 hr/ 6 mo	2000 hr/ 1 yr.	PROCEDURE OR QUANTITY	SPECIFICATION
	ENGINE SPEED						
	IDLE SPEED					Adjust as	
	Mazda M4-1.5G		X			Required	700 to 750 rpm
	Mazda M4-2.0G						700 to 750 rpm
	Mazda M4-2.5D						700 to 750 rpm
	GOVERNED SPEED					Adjust as	
	Mazda M4-1.5G		X			Required	2500 to 2900 rpm
	Mazda M4-2.0G						2600 to 2700 rpm
	Mazda M4-2.5D						2100 to 2200 rpm
16	LIFT CHAIN		X, L			As Required	Engine Oil
	WHEEL NUTS						
	DRIVE WHEELS (Pneumatic)		Х			Check Torque	204-224 Nm (150-165 lbf ft)
1	DRIVE WHEELS (Cushion)		Х			Check Torque	128 Nm (95 lbf ft)
	STEER WHEELS (Pneumatic)		Х	İ		Check Torque	114-136 Nm (84-100 lbf ft)
	STEER WHEELS (Cushion)		Х			Check Torque	34 Nm (28 lbf ft)
15,19	MAST						See NOTE 4
ł	PIVOTS		L			2 Fittings	Multi-Purpose Grease
	SLIDING SURFACES AND	,	L			As Required	Multi-Purpose Grease
	LOAD ROLLER SURFACES						Multi-Purpose Grease
	SIDE-SHIFT CARRIAGE		L			4 Fittings	Multi-Purpose Grease
3	STEERING AXLE						See NOTE 4
	LINKS		L			4 Fittings	Multi-Purpose Grease
	KING PIN BEARINGS		L			During Assembly	Multi-Purpose Grease
22	SPARK PLUGS		Х	С		4 Spark Plugs	See Parts Manual
	PEDALS, LEVERS, SEAT RAILS,					Lubricate as	Hyster Part No. 328388
	CABLES, HINGES, LINKAGES,					Necessary	See NOTE 5
	HOOD LATCH,		١.			1 Pump Drive	Multi-Purpose Grease
	PUMP DRIVE		L	<u> </u>	С	Fitting	See NOTE 4
17	DIFFERENTIAL OIL		х		С	2.5 litre (3.0 qt)	SAE 90 to 30°C (86°F), SAE 140 at 30°C (86°F) & above
l	DRIVE BELTS AND TIMING					Adjust or	See Parts Manual
28	BELT (Mazda M4-2.0G)		Х		С	Install New	See NOTE 6
	INCHING/BRAKE		Х			Adjust as Needed	
	PCV VALVE			Х	С	Install New	See Parts Manual
	TIMING						
}	Mazda M4-1.5G (Gasoline)			X			0° BTDC
	Mazda M4-1.5G (LPG)			X		Adjust as	7° BTDC
	Mazda M4-2.0G (Gasoline)			X		Required	0° BTDC
	Mazda M4-2.0G (LPG)			X			8° BTDC
l	Mazda M4-2.5D (Inj. Pump)			X			0° BTDC
	X=Check C=Change	1-11	bricate		II -Che	eck Indicator Light or ga	

X=Check

C=Change

L=Lubricate

CIL=Check Indicator Light or gauge during operation

NOTE 4: Multi-Purpose Grease with 2 to 4% Molybdenum Disulfide NOTE 5: Install new throttle cable every two years or 4000 hours. NOTE 6: Install new timing belt every 2000 hours. Use only hour interval.

ITEM	8 hr/ Daily	250 hr/ 6 wk	1000 hr/ 6 mo	2000 hr/ 1 yr.	PROCEDURE OR QUANTITY	SPECIFICATION
VALVE ADJUSTMENT						
Mazda M4-1.5G (Intake)	l					0.25 mm (0.010 in)
Mazda M4-1.5G (Exhaust)					Adjust as	0.30 mm (0.012 in)
Mazda M4-2.0G (all)					Required	0.30 mm (0.012 in) Hot
Mazda M4-2.5D (all)			X			0.30 mm (0.012 in) Cold
HYDRALILIC OIL EILTER				_	1 oceh	See Parts Manual
HIDRAULIC OIL FILTER					i each	See NOTE 1
TRANSMISSION OIL FILTER						See NOTE 1
Suction Strainer				С	1 each	See Parts Manual
Return Filter				С	1 each	See Parts Manual
WHEEL BEARINGS					See NOTE 7	See NOTE 4
Drive Wheel (Hub Bearings)	1			L	0.5 kg (1 lb)	Multi-Purpose Grease
Steer Wheels				L	0.5 kg (1 lb)	Multi-Purpose Grease
ATTACHMENTS AND OPTIONS					See NOTE 8	As Specified
	VALVE ADJUSTMENT Mazda M4-1.5G (Intake) Mazda M4-1.5G (Exhaust) Mazda M4-2.0G (all) Mazda M4-2.5D (all) HYDRAULIC OIL FILTER TRANSMISSION OIL FILTER Suction Strainer Return Filter WHEEL BEARINGS Drive Wheel (Hub Bearings) Steer Wheels	VALVE ADJUSTMENT Mazda M4-1.5G (Intake) Mazda M4-1.5G (Exhaust) Mazda M4-2.0G (all) Mazda M4-2.5D (all) HYDRAULIC OIL FILTER TRANSMISSION OIL FILTER Suction Strainer Return Filter WHEEL BEARINGS Drive Wheel (Hub Bearings) Steer Wheels	VALVE ADJUSTMENT Mazda M4-1.5G (Intake) Mazda M4-1.5G (Exhaust) Mazda M4-2.0G (all) Mazda M4-2.5D (all) HYDRAULIC OIL FILTER TRANSMISSION OIL FILTER Suction Strainer Return Filter WHEEL BEARINGS Drive Wheel (Hub Bearings) Steer Wheels	VALVE ADJUSTMENT Mazda M4-1.5G (Intake) Mazda M4-1.5G (Exhaust) Mazda M4-2.0G (all) Mazda M4-2.5D (all) HYDRAULIC OIL FILTER Suction Strainer Return Filter WHEEL BEARINGS Drive Wheel (Hub Bearings) Steer Wheels	VALVE ADJUSTMENT Mazda M4-1.5G (Intake) Mazda M4-2.0G (all) Mazda M4-2.5D (all) HYDRAULIC OIL FILTER Suction Strainer Return Filter WHEEL BEARINGS Drive Wheel (Hub Bearings) Steer Wheels	VALVE ADJUSTMENT Mazda M4-1.5G (Intake) Mazda M4-2.0G (all) Mazda M4-2.5D (all) HYDRAULIC OIL FILTER Suction Strainer Return Filter WHEEL BEARINGS Drive Wheel (Hub Bearings) Steer Wheels VALVE ADJUSTMENT Abril hr/ 6 wk 6 mo 1 yr. Adjust as Required X TRANSMISSION OIL FILTER Suction Strainer C 1 each C 1 e

X=Check

C=Change

L=Lubricate

CIL=Check Indicator Light or gauge during operation

Tires And Wheels (See FIGURE 3.)

NOTE 1: Change at 1st 100 hrs. (hour meter) with NEW or rebuilt unit. NOTE 4: Multi-Purpose Grease with 2 to 4% Molybdenum Disulfide

NOTE 7: At major service or repair

NOTE 8: Perform maintenance as specified by the manufacturer.

MAINTENANCE PROCEDURES **EVERY 8 HOURS OR DAILY**



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.



A CAUTION

Disposal of lubricants and fluids must meet local environmental regulations.

HOW TO MAKE CHECKS WITH THE **ENGINE STOPPED**

Put the lift truck on a level surface. Lower the carriage and forks, stop the engine and apply the parking brake. Do all the checks outside of the engine compartment first. Open the hood and check for leaks and conditions that are not normal. Clean any oil or fuel spills. Make sure that lint, dust, paper, and other materials are removed from the engine compartment.

MARNING WARNING

Air pressure in pneumatic tires can cause tire and wheel parts to explode. The explosion of wheel parts can cause serious injury or death.

Remove all of the air from the tires before the tires are removed from the lift truck.

If the air pressure is less than 80% of the correct air pressure, the tire must be removed before air is added. Put the tire in a safety cage when adding air pressure to the tire. Follow the procedures described in "Add Air To The Tires".

When air is added to the tires, use a remote air chuck. The person adding air must stand away and to the side and not in front of the tire.

If the lift truck has pneumatic tires, keep the tires at the correct air pressure. See the Nameplate. Check the air pressure with a gauge when the tires are cold. If it is necessary to add air to a tire that is warm, check one of the other tires on the same axle and add air to the tire that has low pressure so that the air pressures are equal. The air pressure of the warm tires must always be equal to or greater than the specification for air pressure for cold tires.

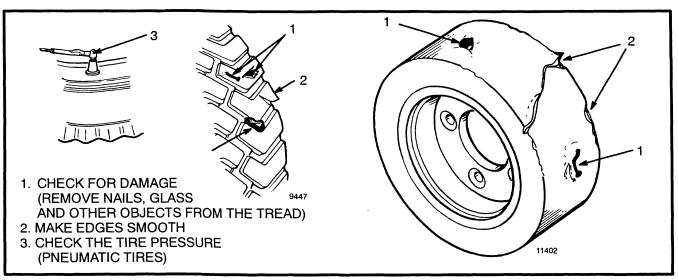


FIGURE 3. CHECK THE TIRES

Check the tires for damage. Inspect the tread and remove any objects that will cause damage. Check for bent or damaged rims. Check for loose or missing parts. Remove any wire, straps or other material wrapped around the axle.

Make sure the drive wheel nuts are tight. Tighten the wheel nuts in a cross pattern to the correct torque value shown in the MAINTENANCE SCHEDULE.

A CAUTION

Check all wheel nuts after 2 to 5 hours of operation: when new lift trucks begin operation and on all lift trucks when the wheels have been removed and installed. Tighten the nuts in a cross pattern to the correct torque value shown in the MAINTENANCE SCHEDULE. When the nuts stay tight for eight hours, the interval for checking the torque can be extended to 250 hours.

Forks

The identification of a fork describes how the fork is connected to the carriage. These lift trucks have hook-type forks. See FIGURE 4.

Forks, Adjustment

The forks are connected to the carriage by hooks and lock pins. See FIGURE 4. These lock pins are installed through the top fork hooks and fit into slots in the top carriage bar. Adjust the forks as far apart as possible for maximum support of the load. Hook forks will slide

along the carriage bars to adjust for the load to be lifted. Raise the lock pin in each fork to slide the fork on the carriage bar. Make sure the lock pin is engaged in the carriage bar to lock the fork in position after the width adjustment is made.

Forks, Removal



Do not try to move a fork without a lifting device. Each hook fork for these lift trucks can weigh 45 kg to 105 kg (100 to 225 lb).

A fork can be removed from the carriage for replacement of the fork or other maintenance. Slide the fork to the fork removal notch on the bottom carriage bar. See FIGURE 4. Lower the fork onto blocks so that the bottom hook of the fork moves through the fork removal notch. See FIGURE 5. Lower the carriage further so that the top hook of the fork is disengaged from the top carriage bar. Move the carriage away from the fork, or use a lifting device to move the fork away from the carriage.

Forks, Installation

Move the fork and carriage so that the top hook on the fork can engage the upper carriage bar. Raise the carriage to move the lower hook through the fork removal notch. Slide the fork on the carriage so that both upper and lower hooks engage the carriage. Engage the lock pin with a notch in the upper carriage bar.

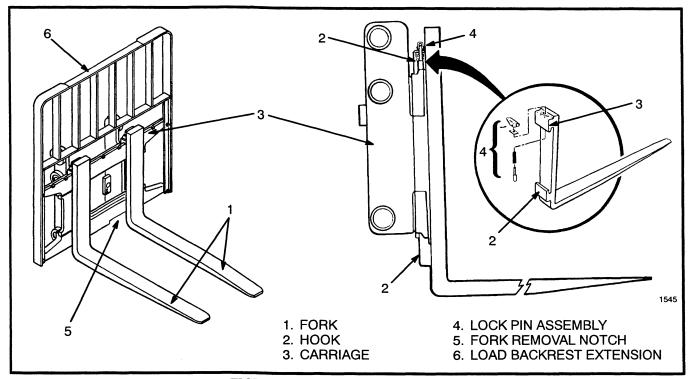


FIGURE 4. CARRIAGE AND FORKS

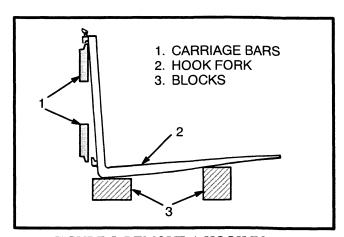


FIGURE 5. REMOVE A HOOK FORK

Inspection Of Forks, Mast, And Lift Chains (See FIGURE 6. and FIGURE 7.)

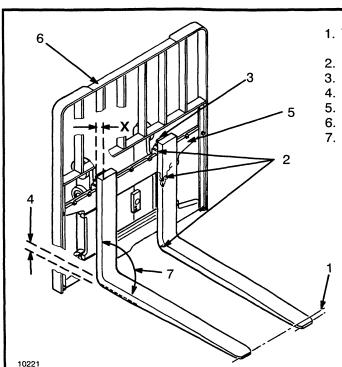
A WARNING

When working on or near the mast, see SAFETY PROCEDURES WHEN WORKING NEAR THE MAST in GENERAL PROCEDURES at the end of this section.

Lower the lift mechanism completely. Never allow any person under a raised carriage. Do not put any part of your body in or through the lift mechanism unless all parts of the mast are completely lowered and the engine is STOPPED. Do not try to correct the alignment of the fork tips by bending the forks or adding shims. Replace damaged forks.

Never repair damaged forks by heating or welding. Forks are made of special steel using special procedures. Replace damaged forks.

- 1. Inspect the welds on the mast and carriage for cracks. Make sure that the capscrews and nuts are tight.
- 2. Inspect the channels for wear in the areas where the rollers travel. Inspect the rollers for wear or damage.
- 3. Inspect the load backrest extension for cracks and damage.
- 4. Inspect the forks for cracks and wear. Check that the fork tips are aligned as shown in FIGURE 6. Check that the bottom of the fork is not worn (Item 4).
- 5. Replace any damaged or broken parts that are used to keep the forks locked in position.
- 6. If the lift truck is equipped with a side-shift carriage or attachment, inspect the parts for cracks and wear. Make sure the parts that fasten the side-shift carriage or attachment to the carriage are in good condition.
- 7. Check that the lift chains are correctly lubricated. Use SAE 30 engine oil to lubricate the lift chains.



- 1. TIP ALIGNMENT (MUST BE WITHIN 3% OF FORK LENGTH
- 2. CRACKS
- 3. LATCH DAMAGE
- 4. HEEL OF FORK (MUST BE 90% OF DIMENSION "X")
- 5. CARRIAGE
- 6. LOAD BACKREST EXTENSION
- 7. MAXIMUM ANGLE 93°

FORK TIP ALIGNMENT								
3% DIMENSION								
27 mm (1.10 in) 37 mm (1.45 in) 55 mm (2.15 in)								

FIGURE 6. CHECK THE FORKS

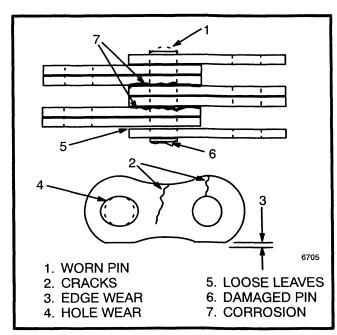


FIGURE 7. CHECK THE LIFT CHAINS

- 8. Inspect the lift chains for cracks or broken links and pins. See FIGURE 7.
- 7. Check that the lift chains are correctly lubricated. Use SAE 30 engine oil to lubricate the lift chains.
- 9. Inspect the chain anchors and pins for cracks and damage.

10. Make sure the lift chains are adjusted so that they have equal tension. Adjustment or replacement of the lift chains must be done by authorized personnel. See Lift Chain Adjustments described in the GENERAL PROCEDURES later in this section.

Safety Labels

A WARNING

Safety labels are installed on the lift truck to give information about operation and possible hazards. It is important that all safety labels are installed on the lift truck and can be read.

Check that all safety labels are installed in the correct location on the lift truck. See the PARTS MANUAL or the FRAME section of the SERVICE MANUAL for the correct location of the safety labels. See the FRAME section for the installation procedure.

Operator Restraint System (See FIGURE 8.)

The seat belt, hip restraints, seat and mount, hood and latches are all part of the operator restraint system. Each item must be checked to make sure it is fastened correctly, functions correctly and is in good condition.

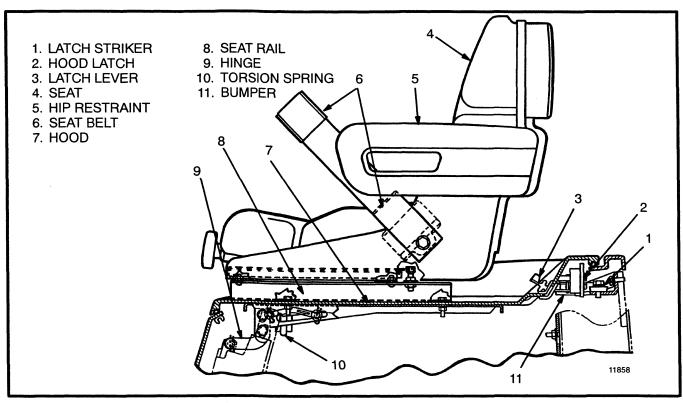


FIGURE 8. CHECK THE HOOD AND SEAT

See FIGURE 8. Make sure the seat rails and latch striker are not loose. The seat rails must lock tightly in position, but move freely when unlocked. The seat rails must be correctly fastened to the mount surface. If the mount surface is the hood, the hood must be fastened to the floor plate with the latch. The floor plate must be fastened to the lift truck frame. Try to lift the hood to make sure it is fastened correctly and will not move.

The end of the seat belt must fasten correctly in the latch. Make sure the seat belt pulls from the retractor assembly

and retracts smoothly. The seat belt must be in good condition. A seat belt that is damaged or worn will not give protection when it is needed. If the seat belt can not be pulled from the retractor assembly, replace the seat belt assembly.

Steering Column Latch

Make sure the latch for the steering column operates correctly. The latch must NOT allow the column to move unless the latch is released.

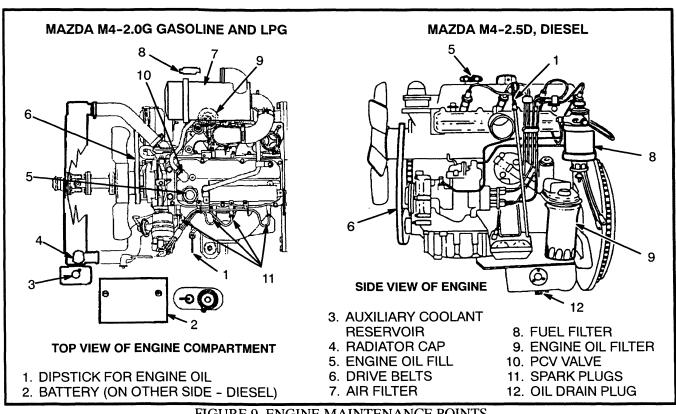


FIGURE 9. ENGINE MAINTENANCE POINTS

Check For Fuel, Oil Or Coolant Leaks

Make a visual check for leaks on and under the lift truck. If possible, find and repair the leak at the source. Leaks often indicate a need for repair of damaged or worn components. Leaks in the LPG fuel system are usually not visible unless ice is visible. There is however, usually a strong odor. Fuel leaks MUST be repaired NOW.

WARNING

All fuels are very flammable and can burn or cause an explosion. Do not use an open flame to check the fuel level or to check for leaks in the fuel system. If there is a leak in the fuel system, extra care must be used during the repair. Do not operate the lift truck until a leak is repaired.

Check the fuel system for leaks and the condition of parts. When fuel is added to the lift truck, see the section, How To Add Fuel To The Lift Truck procedures in the **OPERATING MANUAL.**

Also check the condition of the radiator or heater hoses that are not leaking. Soft or cracked hoses need to be replaced before a major leak occurs.

Drive Belt (See FIGURE 9.)

Check the drive belts for wear and damage. The alternator light can also come ON during operation if the drive belt does not have the correct tension. Refer to the section EVERY 250 HOURS OR TWO MONTHS to check and adjust the tension.

Engine Oil (See FIGURE 9.)

Check the oil level in the engine daily. After the engine has stopped, wait one minute before checking the oil level. Keep the oil at the correct level as indicated on the dipstick. Use the correct oil as shown in the MAINTE-NANCE SCHEDULE.

There is an indicator light on the instrument cluster for the engine oil pressure. The red light is **ON** when the key switch is in the START position and must go OFF when the engine is running. If the light is **ON** when the engine is running, the engine oil pressure is low. Stop the engine and check the oil level.

Transmission Oil Level (See FIGURE 10.)

A check of the transmission oil level is normally required only every 250 hours of operation. Heavy duty or high temperature operations can require more frequent checks.