SERVICE MANUAL

S135-155XL (B024)



FORM 897335 Rev. 02/04

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SERVICE MANUAL CONTENTS

Section	SRM Number	Rev Date
FRAME	0100 SRM 0449	12/03
GM V6-4.3L ENGINE (CARBURETED)	0600 SRM 0104	09/93
PERKINS DIESEL ENGINE-1000 SERIES	0600 SRM 0412	08/97
GM V6-4.3L ENGINE WITH FUEL INJECTION	0600 SRM 0590	11/03
PERKINS DIESEL ENGINE-1000 SERIES (AR, YG, YH)	0600 SRM 0705	09/03
COOLING SYSTEM	0700 SRM 0626	11/01
WEBER CARBURETOR WITH GOVERNOR	0900 SRM 0347	12/92
LPG FUEL SYSTEM	0900 SRM 0348	09/01
OIL CLUTCH SYSTEM	1200 SRM 0334	11/97
TWO-SPEED PS TRANS-DESCR / OPER	1300 SRM 0324	10/03
TWO-SPEED PS TRANSMISSION-REPAIR	1300 SRM 0325	10/03
THREE-SPEED MANUAL TRANSMISSION	1300 SRM 0335	02/04
DIFFERENTIAL	1400 SRM 0046	11/03
DRIVE AXLE	1400 SRM 0450	09/03
STEERING CONTROL UNIT	1600 SRM 0054	10/03
STEERING AXLE	1600 SRM 0451	09/03
BRAKE SYSTEM	1800 SRM 0452	02/04
HYDRAULIC GEAR PUMPS	1900 SRM 0097	10/03
HYDRAULIC PUMP DRIVE ASSEMBLY	1900 SRM 0339	10/03
HYDRAULIC SYSTEM	1900 SRM 0453	09/03
MAIN CONTROL VALVE	2000 SRM 0090	10/03
TILT CYLINDERS	2100 SRM 0103	10/03
ALTERNATOR	2200 SRM 0002	10/03
STARTER	2200 SRM 0106	02/01
HIGH ENERGY IGNITION SYSTEM	2200 SRM 0107	03/02
INSTRUMENT PANEL INDICATORS / SENDERS	2200 SRM 0143	12/03
MSTS-GM V6-4.3L (EARLY CONTROL MODULES)	2200 SRM 0463	04/93
GM V6 ENGINE CONTROL-REPAIR (EARLY MODULES)	2200 SRM 0468	05/96
GM V6 ENG CONTROL-DESC/OPER (EARLY MODULES)	2200 SRM 0473	03/94
MSTS-GM V6-4.3L (LATER CONTROL MODULES)	2200 SRM 0765	11/01
GM V6 ENG CONTROL-DESC/OPER (LATER MODULES)	2200 SRM 0781	01/00
GM V6 ENGINE CONTROL-REPAIR (LATER MODULES)	2200 SRM 0782	03/00
LIFT CYLINDERS	4000 SRM 0135	10/03
MASTS	4000 SRM 0329	10/03
METRIC AND INCE (SAE) FASTENERS	8000 SRM 0231	03/03
PERIODIC MAINTENANCE	8000 SRM 0393	12/03

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Legend for Figure 18

A. BEFORE TIGHTENING LOCK NUT, MAKE SURE THE HARE SYMBOL IS DIRECTLY FORWARD AND THE TORTOISE SYMBOL IS REARWARD.

1. ROD END
2. ROD
3. CAPSCREW
4. NUT
5. STRAIGHT LINK
6. LINK
7. PIN (ROD END)
8. PIN (ROD END)
9. CRANK WELDMENT
10. LEVER WELDMENT (RIGHT HAND)
11. RANGE KNOB
12. BRACKET WELDMENT
13. CRANK
14. PIN
15. SHAFT
16. TRANSMISSION
17. ROD END

LINKAGE FOR DIRECTION CONTROL LEVER - LATER MODEL H6.00-7.00XL (H135-155XL, H135-155XL$_2$) (F006, G006) TRUCKS

1. Adjust link (1 and 2, Figure 19) so the distance between the center of the pins is 420 ±2 mm (16.54 ±0.08 in.). Tighten lock nuts (12) and install.
2. Move shift lever to **REVERSE** position.
3. Check dimension K to ensure it is the correct distance of 55 ±3 mm (2.17 ±0.08 in.). Dimension K is to rear edge of middle crank hole.
4. Adjust link (6, 7, and 13, Figure 19) so the distance between the center of the pins is 460 ±2 mm (18.11 ±0.08 in.). Lock rod ends with nut (6). Install link in center hole of crank (5).
5. Check the diameter of dimension M. The diameter of dimension M should be 20 ±3 mm (0.80 ±0.12 in.). Dimension M is to rear edge of crank hole.
6. Shift transmission spool to **REVERSE** position (spool pushed into transmission until spool locating detent engages).
7. Install and adjust link (6, 7, and 13, Figure 19) so the lever is in its **REVERSE** position and clevis pin slides freely through clevis and crank hole.
8. Turn clevis one additional turn onto the rod. Tighten lock nuts and install.
9. Shift into **FORWARD** position and check the spool overtravel. Measure the amount of spool movement while pushing the lever onto the **FORWARD** stop and then letting go of the lever, allowing spool detent to engage. If overtravel is 1.0 ±0.5 mm (0.04 ±0.02 in.), go to Step 1. If overtravel is greater than 1.5 mm (0.06 in.), go to step Step 10. If overtravel is less than 0.5 mm (0.02 in.), go to Step 11.
10. If overtravel is greater than 1.5 mm (0.06 in.), move the clevis to the hole closest to the shaft and lengthen link (6,7, and 13, Figure 19) by 4 mm (0.16 in.), 4-1/2 turns.
11. If overtravel is less than 0.5 mm (0.02 in.), use the hole farthest from the shaft and lengthen link (6,7, and 13, Figure 19) by 4 mm (0.16 in.), 4-1/2 turns. Adjust per instructions in Step 6, Step 7, and Step 8.

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Troubleshooting

PROBLEM	POSSIBLE CAUSE	PROCEDURE OR ACTION
The steering wheels do not move when the steering wheel is turned.	The oil level is low or there is no oil in the tank.	Fill tank. Check for leaks.
	The steering control unit is damaged.	Repair or install new control unit.
	No oil flow from the steering control unit to the steering cylinder.	Repair or install new components. Check for leaks.
Slow or difficult steering.	Relief valve for the steering system needs adjustment.	Adjust or install new relief valve.
	Low oil pressure from the hydraulic pump.	Check for restrictions. See the Troubleshooting Chart in the **Hydraulic System** 1900 SRM 453.
	Seal in the steering cylinder has a leak.	Install new seal.
	Steering control unit is worn or has damage.	Repair or install new control unit.
Steering wheel turns the tires in the wrong direction.	The hydraulic lines are not connected correctly at the steering cylinder or at the steering control unit.	Connect lines properly. Remove air from system.
Steering function continues after the steering wheel stops.	The steering control unit was assembled wrong or has damage.	Repair or install new control unit.
There is air in the steering system.	The oil level in the tank is low.	Add hydraulic oil as necessary. Check for leaks.
	Air was not removed after repair to the hydraulic or steering system.	Remove air from system.
	The hydraulic pump has an air leak at the inlet.	Repair system. Remove air from system.

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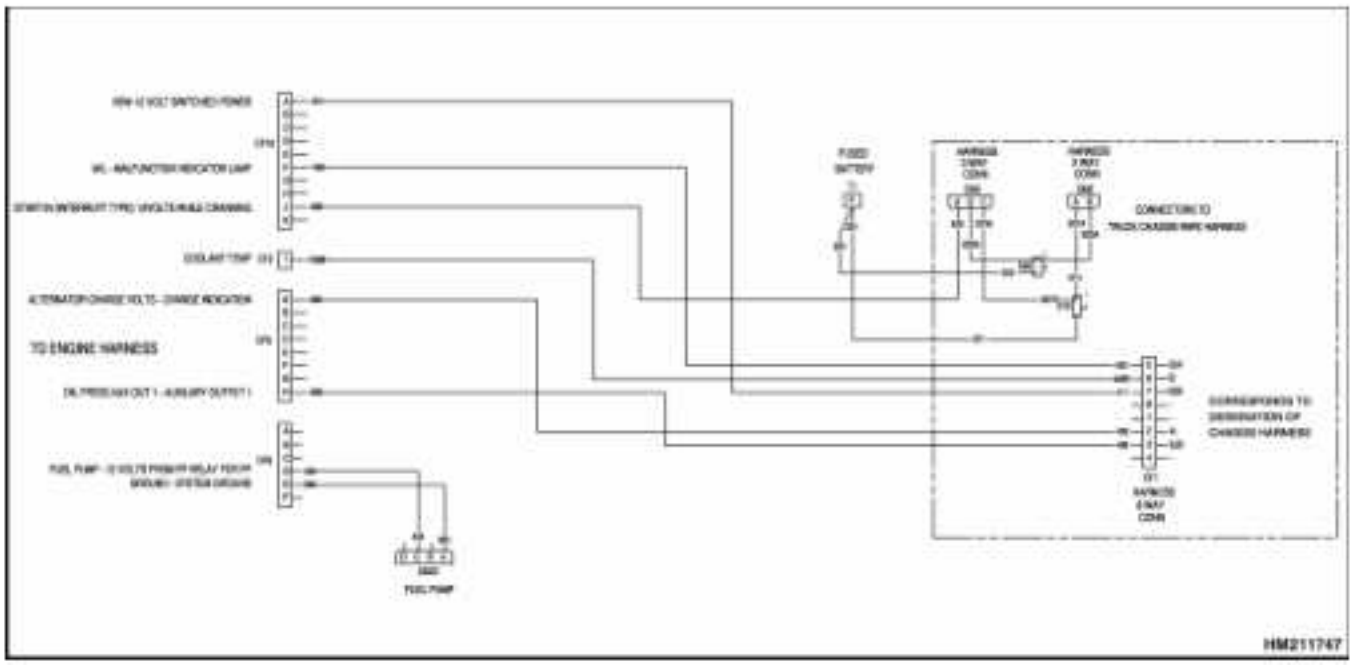


Figure 10. GM V-6 Gas and LPG Engine Electrical Schematic (C024, G006) (Sheet 4 of 4)

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