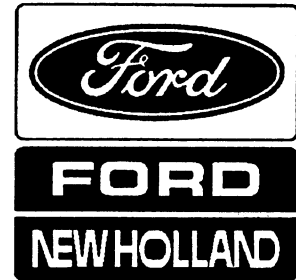


# FORD

## Service Manual

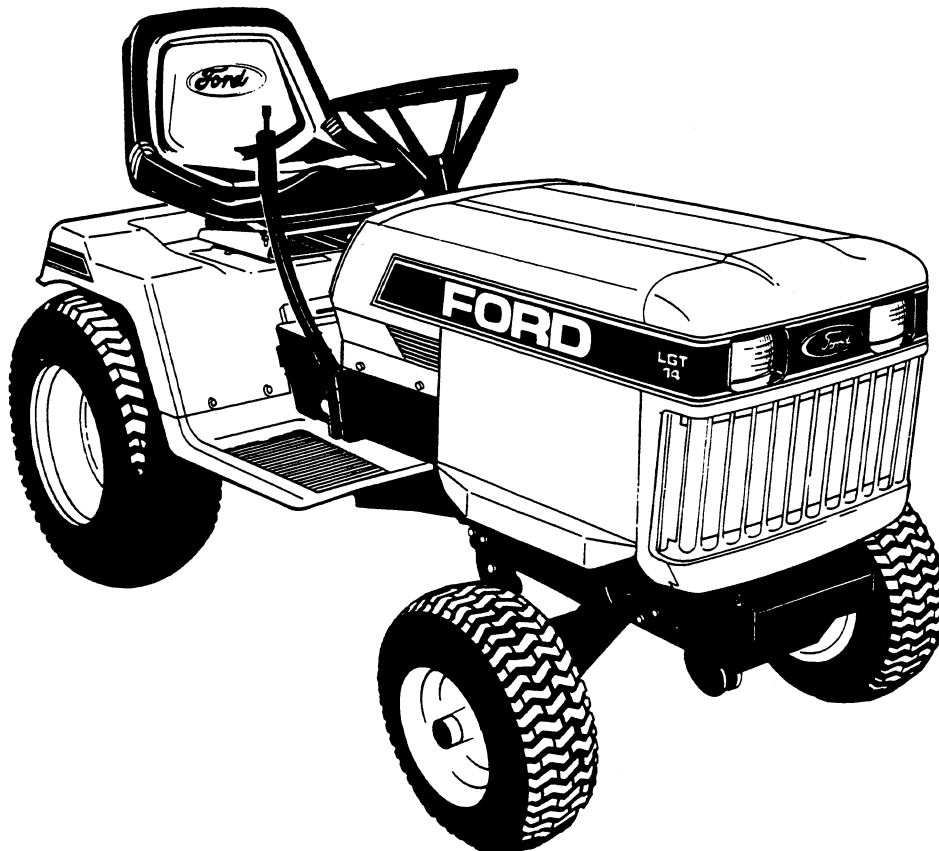


### Lawn and Garden Tractors

Models 09GN2201, 09GN2202, 09GN2203, 09GN2204,  
09GN2205, 09GN2206, 09GN2207, 09GN2208, 09GN2209,  
09GN2210, 09GN2211, 09GN2212, 9607433, 9607434,  
9607435, 9607483, 9801811

Issue 8-94

(Replaces All Previous Issues)



Product: New Holland Lawn and Garden Tractors Service Repair Manual  
Full Download: <https://www.arepairmanual.com/downloads/new-holland-lawn-and-garden-tractors-service-repair-manual/>

Sample of manual. Download All 121 pages at:  
<https://www.arepairmanual.com/downloads/new-holland-lawn-and-garden-tractors-service-repair-manual/>

# LAWN AND GARDEN TRACTOR

## GENERAL INFORMATION CHART

TRACTOR	YEAR	MODEL	TRANSMISSION	ENGINE	PARTS CATALOG	FICHE
LGT12	1984-85	09GN-2201	PEERLESS 2352	KOH K301AQS	17364	226
LGT12 H	1984	09GN-2202	EATON 1100-045	KOH K301AQS	17364	226
LGT12 H	1985	09GN-2205	EATON 1100- 045	KOH K301AQS	17364	226
LGT14	1985-86	09GN-2207	PEERLESS 2352	KOH M14AQS	17364	226
LGT14	1987	09GN-2210	PEERLESS 2352	KOH M14AQS	17401	228
LGT14	1988	9607433	PEERLESS 2352	KOH M14AQS	17417	241
LGT14 H	1985-86	09GN-2208	EATON 1100- 022	KOH M14AQS	17364	226
LGT14 H	1987	09GN-2211	EATON 1100- 022	KOH M14AQS	17401	228
LGT14 H	1988	9607434	EATON 1100- 022	KOH M14AQS	17417	241
LGT17	1984	09GN-2203	PEERLESS 2352	KOH KT17QS	17364	226
LGT17 H	1984	09GN-2204	EATON 1100- 045	KOH KT17QS	17364	226
LGT17 H	1985	09GN-2206	EATON 1100- 045	KOH KT17QS	17364	226
LGT18 H	1986	09GN-2209	EATON 1100- 045	KOH M18QS	17364	226
LGT18 H	1987	09GN-2212	EATON 1100- 045	KOH M18QS	17401	228
LGT18 H	1988	9607435	EATON 1100- 045	KOH M18QS	17417	241
LGT18 H	1989	9607483	EATON 1100- 045	KOH M18QS	17463	241
LGT18 H	1990	9801811	EATON 1100- 045	KOH M18QS	17463	241
LGT18 H	1991	9801811	EATON 1100- 045	KOH M18QS	17461	243

### CATALOG# FICHE#

KOHLER	4048	222
	17473	223

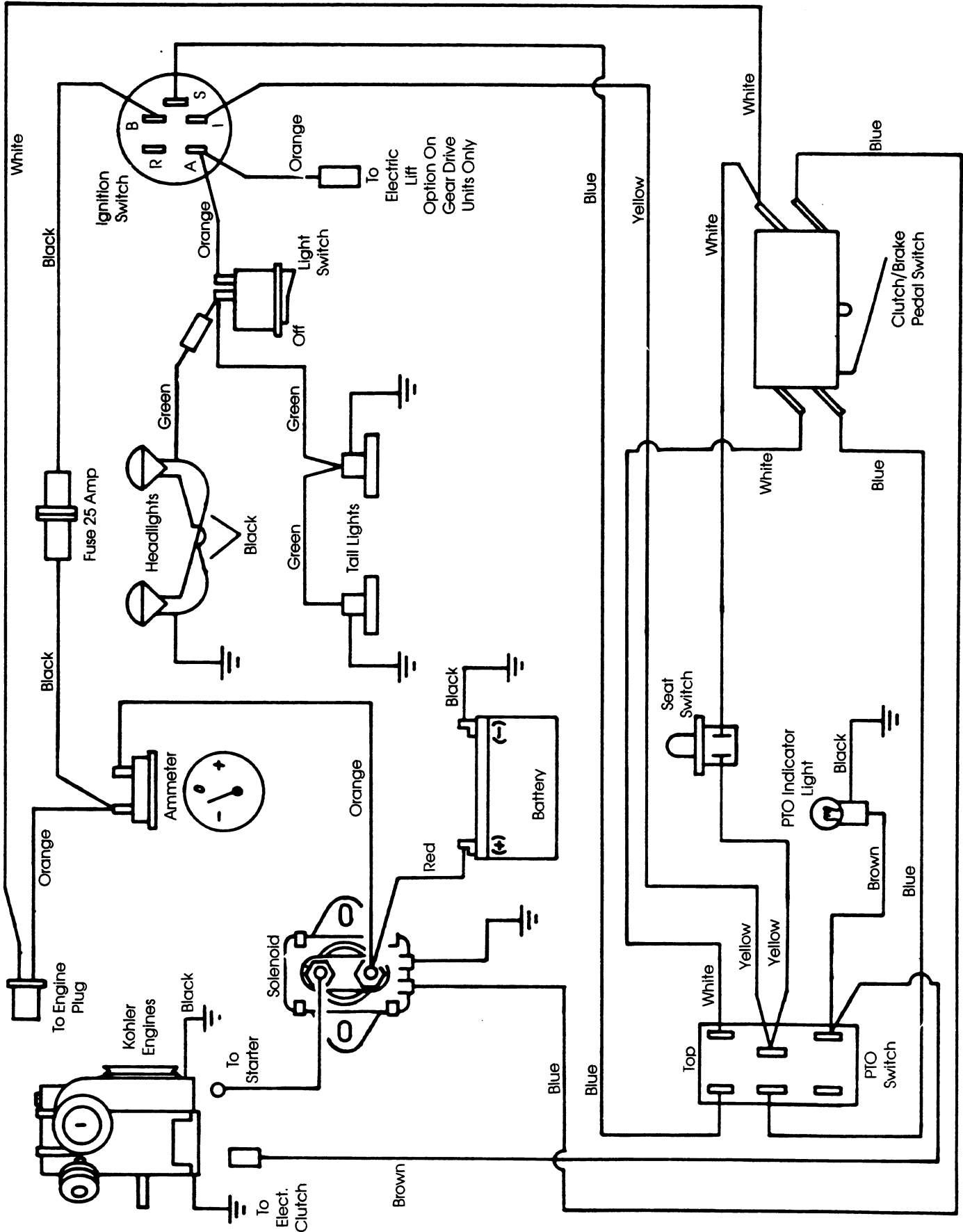
### Engine Model

### New Holland Publications Number

### Kohler Publications Number

K301AQS	—	ENS-575
M14AQS	40547800	TP-2203-A
KT17QS	—	TP-2043-A
M18QS	40547900	TP-2204-A

# WIRING DIAGRAM MODEL 09GN2201

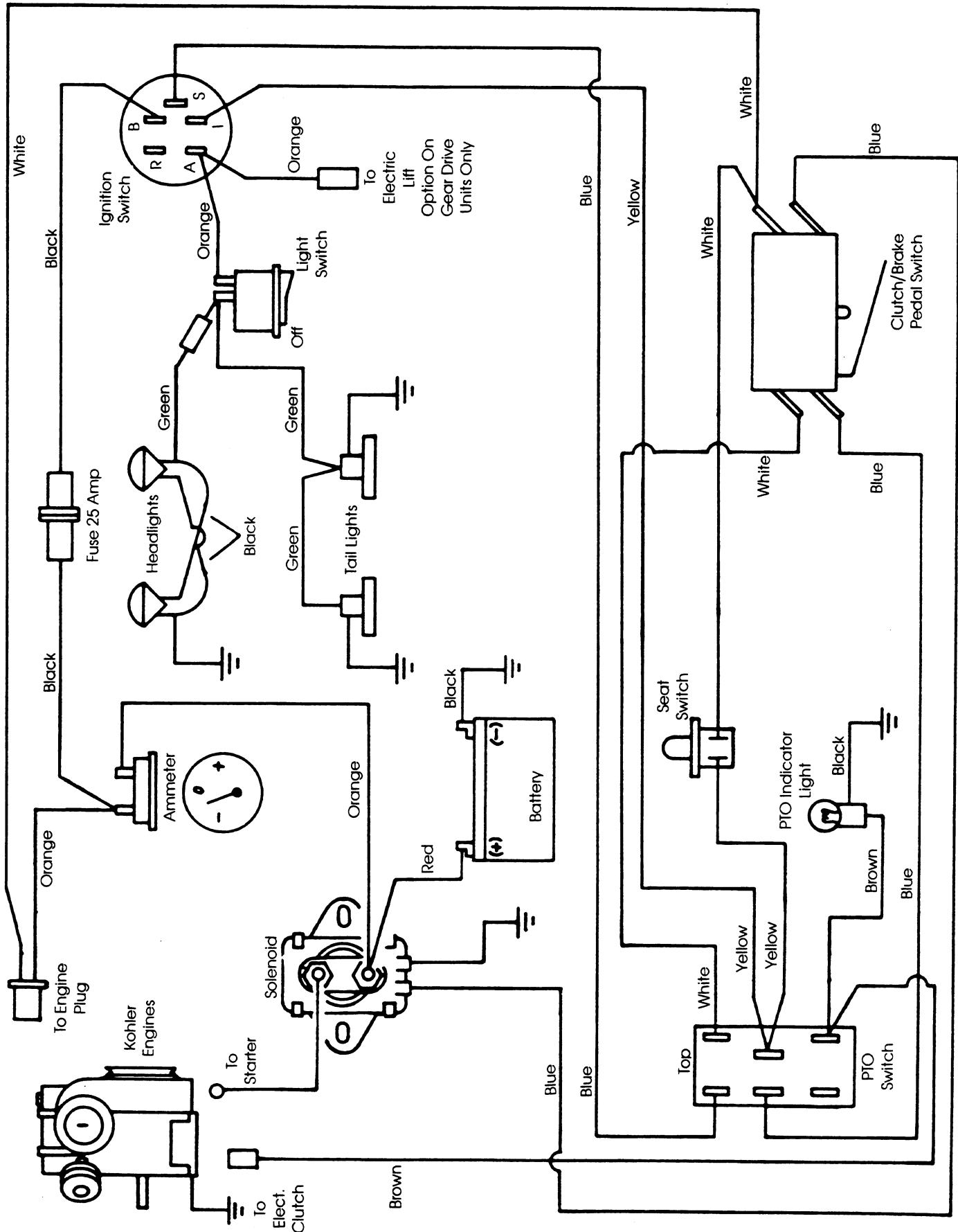


The diagram illustrates the electrical system for a Kohler engine. Key components and their connections are as follows:

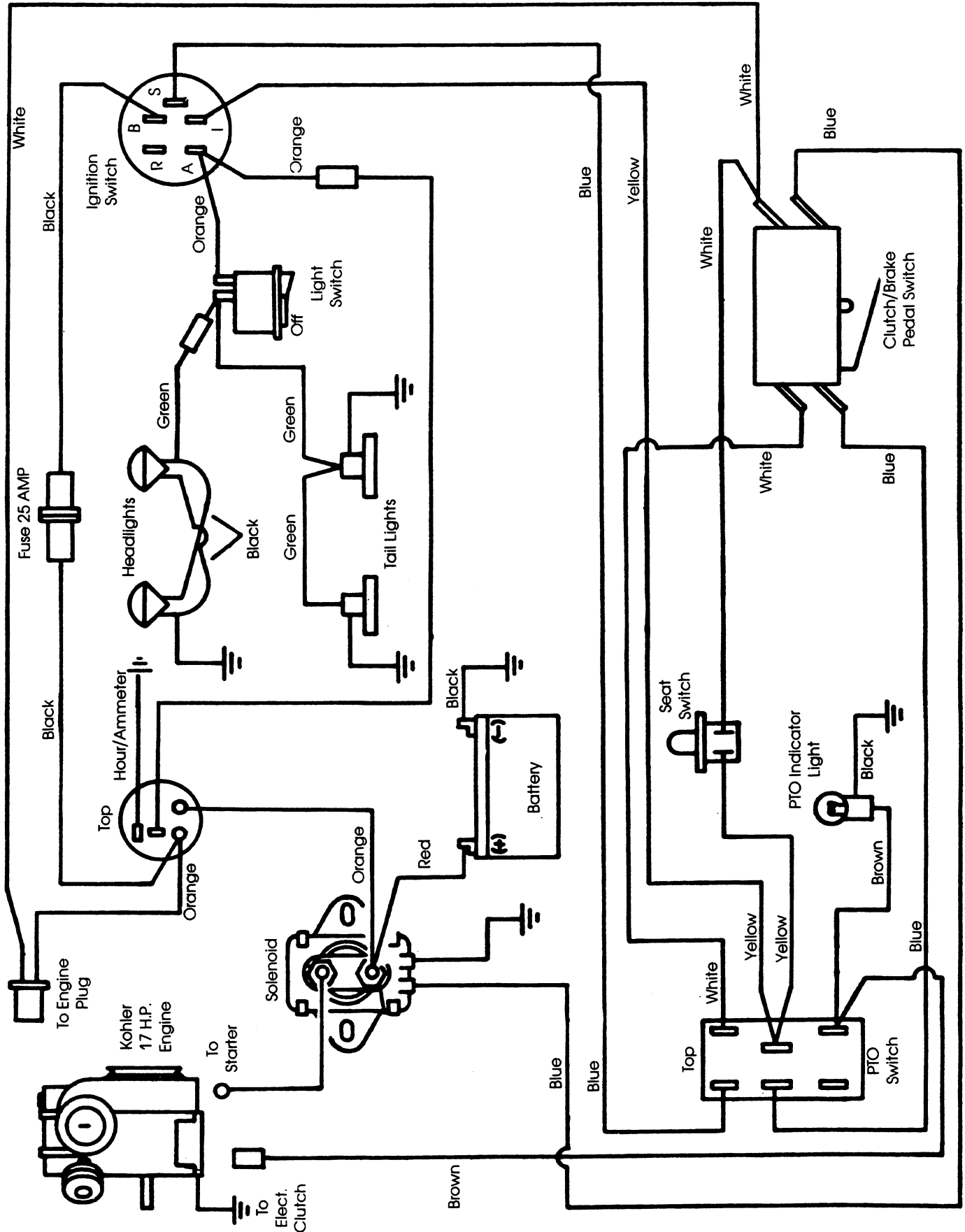
- Ignition Switch:** Features terminals R, B, A, S, and I. It is connected to the battery (Orange), the fuse (Black), the ammeter (Orange), and the solenoid (Orange). The 'I' terminal is connected to the electric lift option.
- Fuse:** A 25 Amp fuse connected between the battery and the headlights.
- Ammeter:** Connected in series with the battery and the headlights.
- Headlights:** Connected to the fuse and the ammeter. The 'Black' label indicates the ground connection.
- Tail Lights:** Connected to the battery (Green) and ground (Black).
- Solenoid:** Connected to the battery (Red) and ground (Black).
- Battery:** The main power source, connected to the solenoid and the seat switch.
- Seat Switch:** Connected to the battery (White) and the PTO indicator light (Black).
- PTO Indicator Light:** Connected to the seat switch (Black) and ground (Black).
- PTO Switch:** A multi-terminal switch connected to the battery (Blue), the PTO indicator light (Brown), and the seat switch (Yellow).
- Clutch/Brake Pedal Switch:** Connected to the battery (Blue) and the PTO switch (White).

The diagram uses color-coded wires to identify the connections: White, Black, Orange, Green, Blue, Yellow, and Brown.

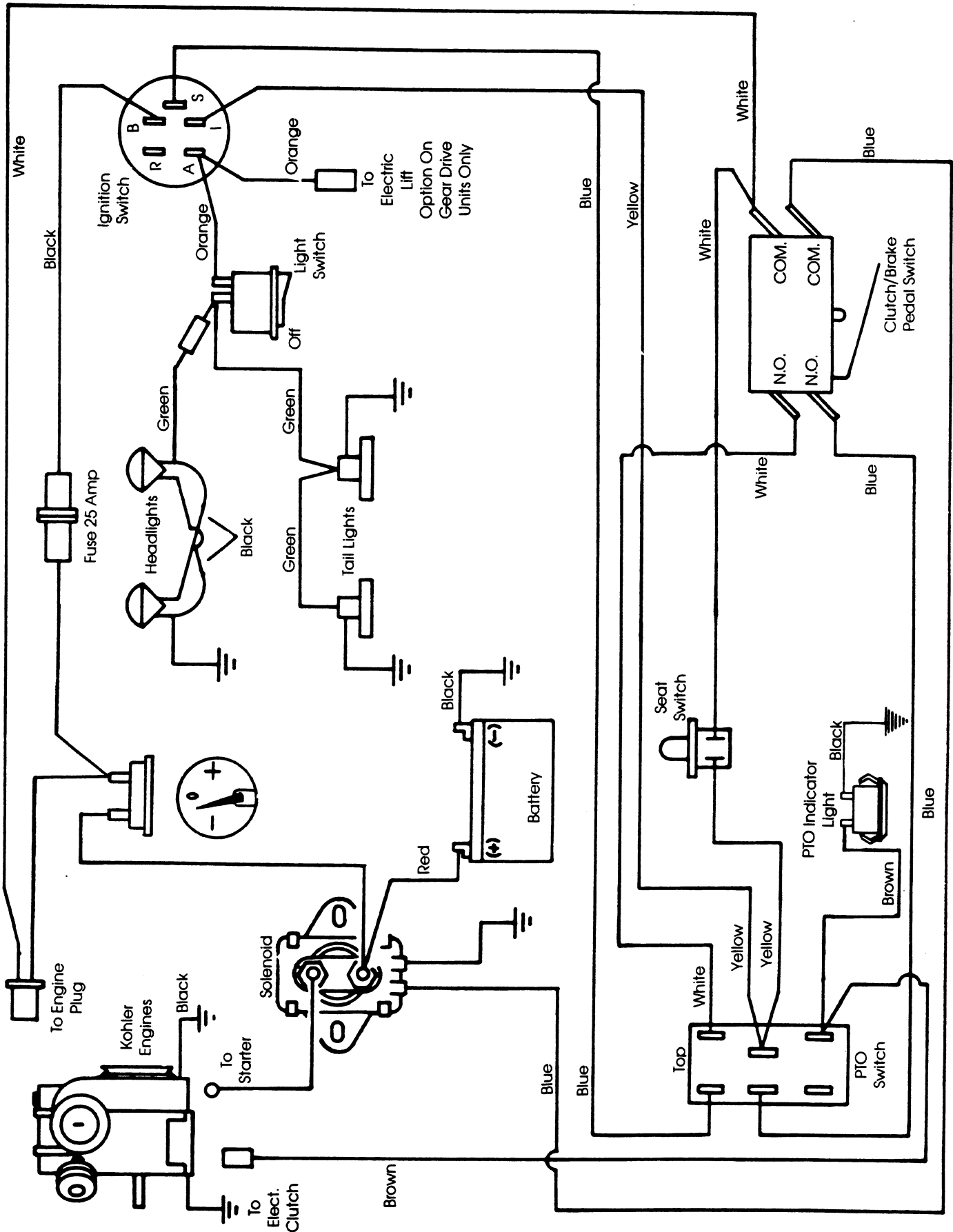
# WIRING DIAGRAM MODEL 09GN2203



WIRING DIAGRAM MODEL 09GN2204

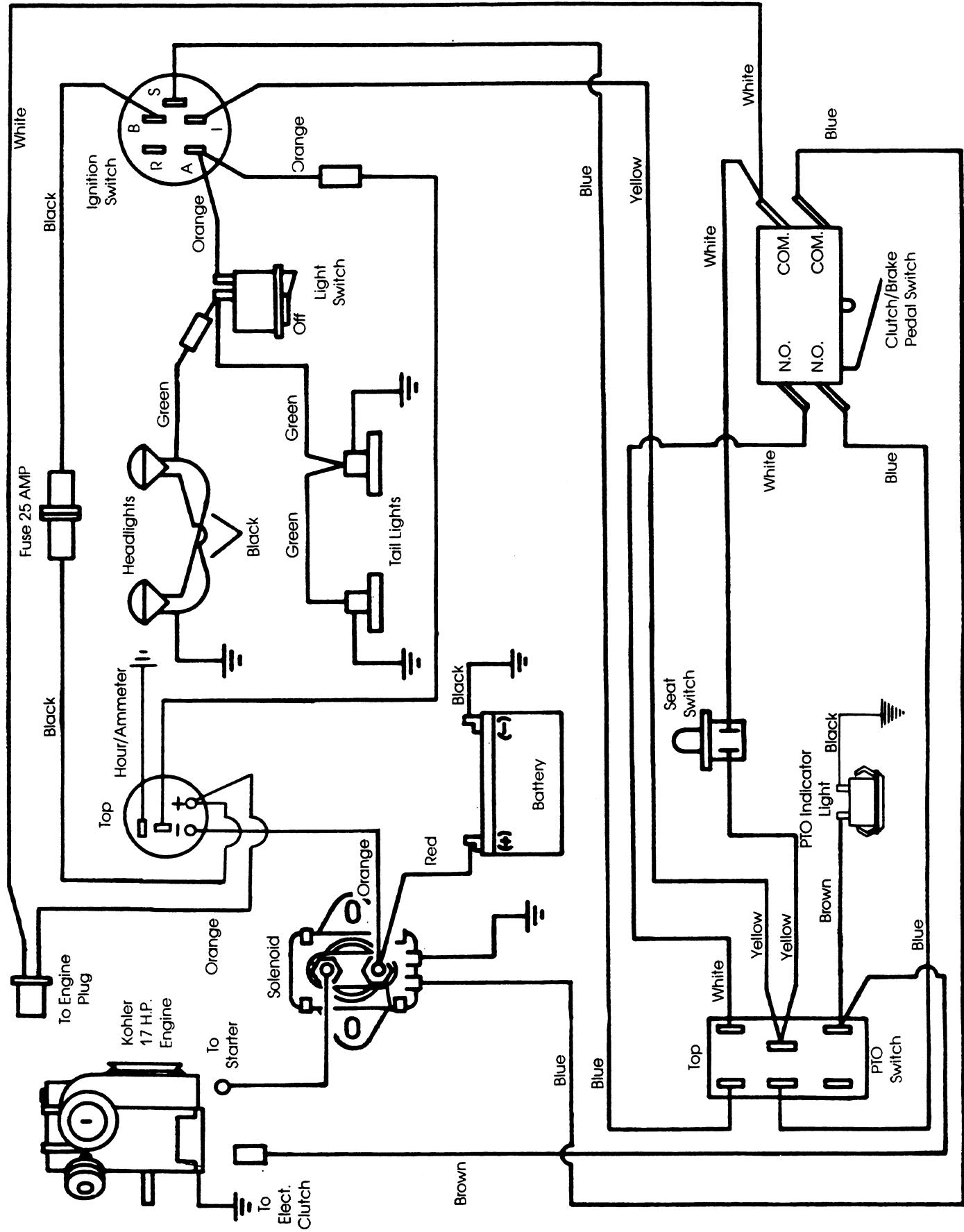


# WIRING DIAGRAM MODEL 09GN2205

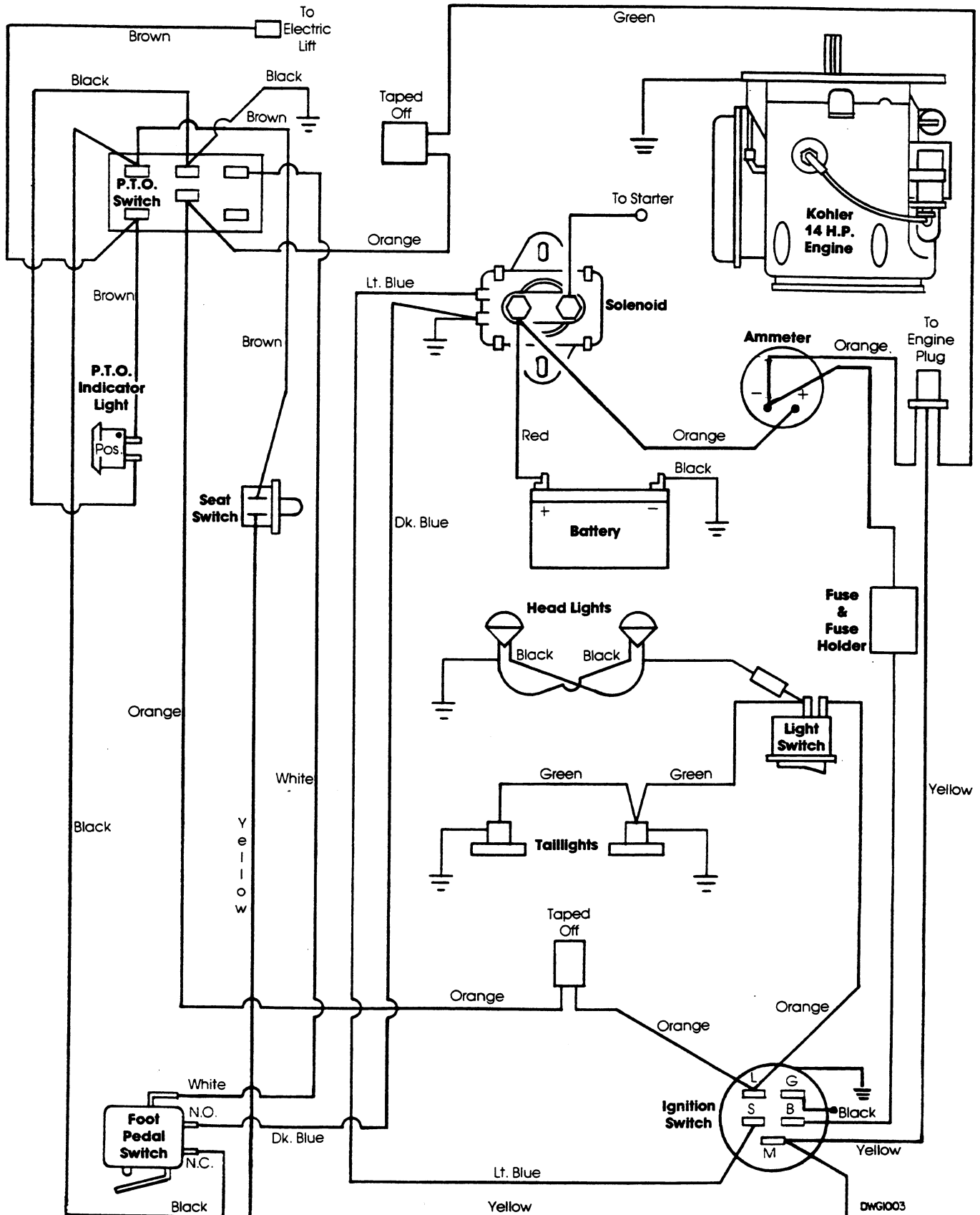




WIRING DIAGRAM MODEL 09GN2206

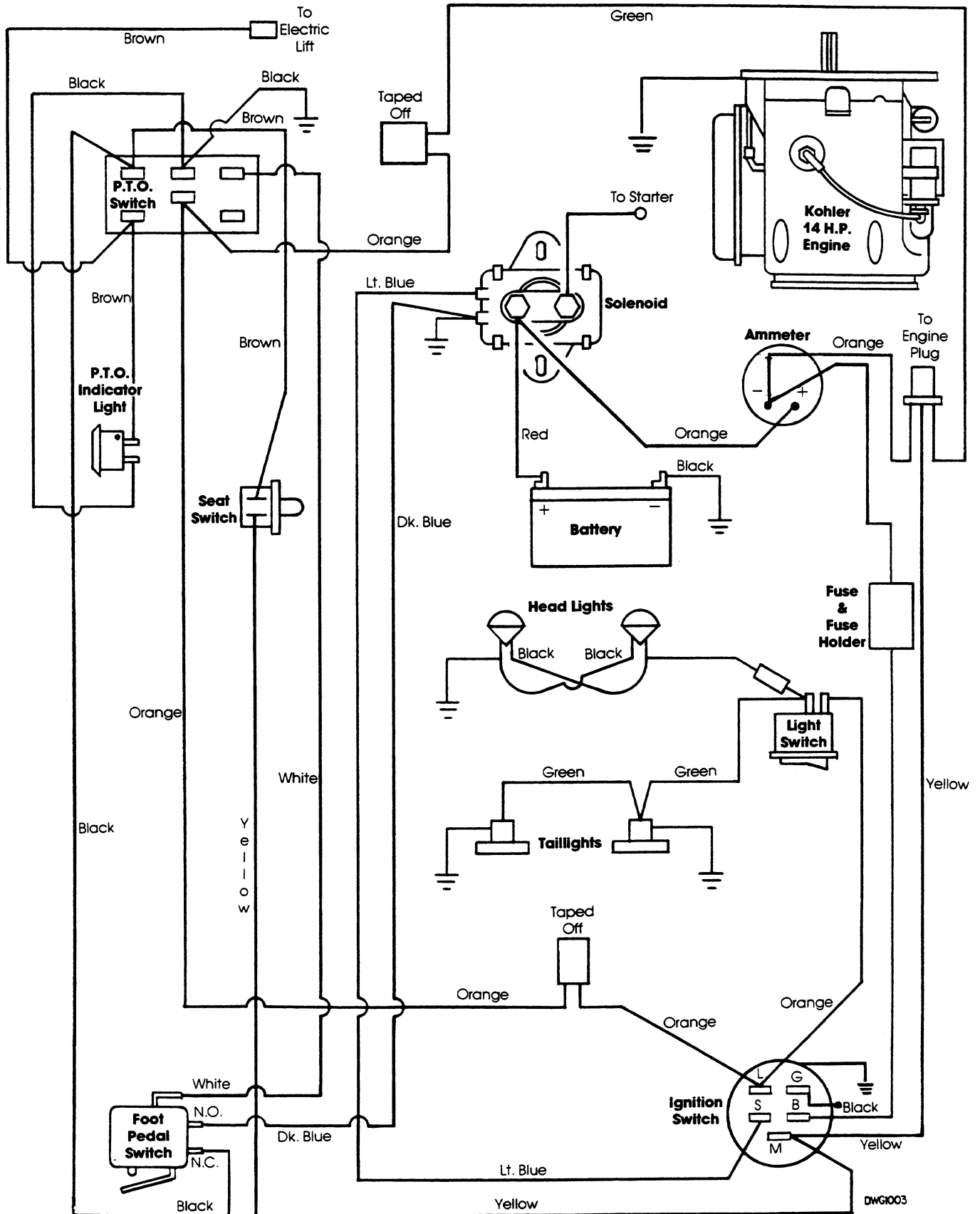


# WIRING DIAGRAM MODEL 09GN2207



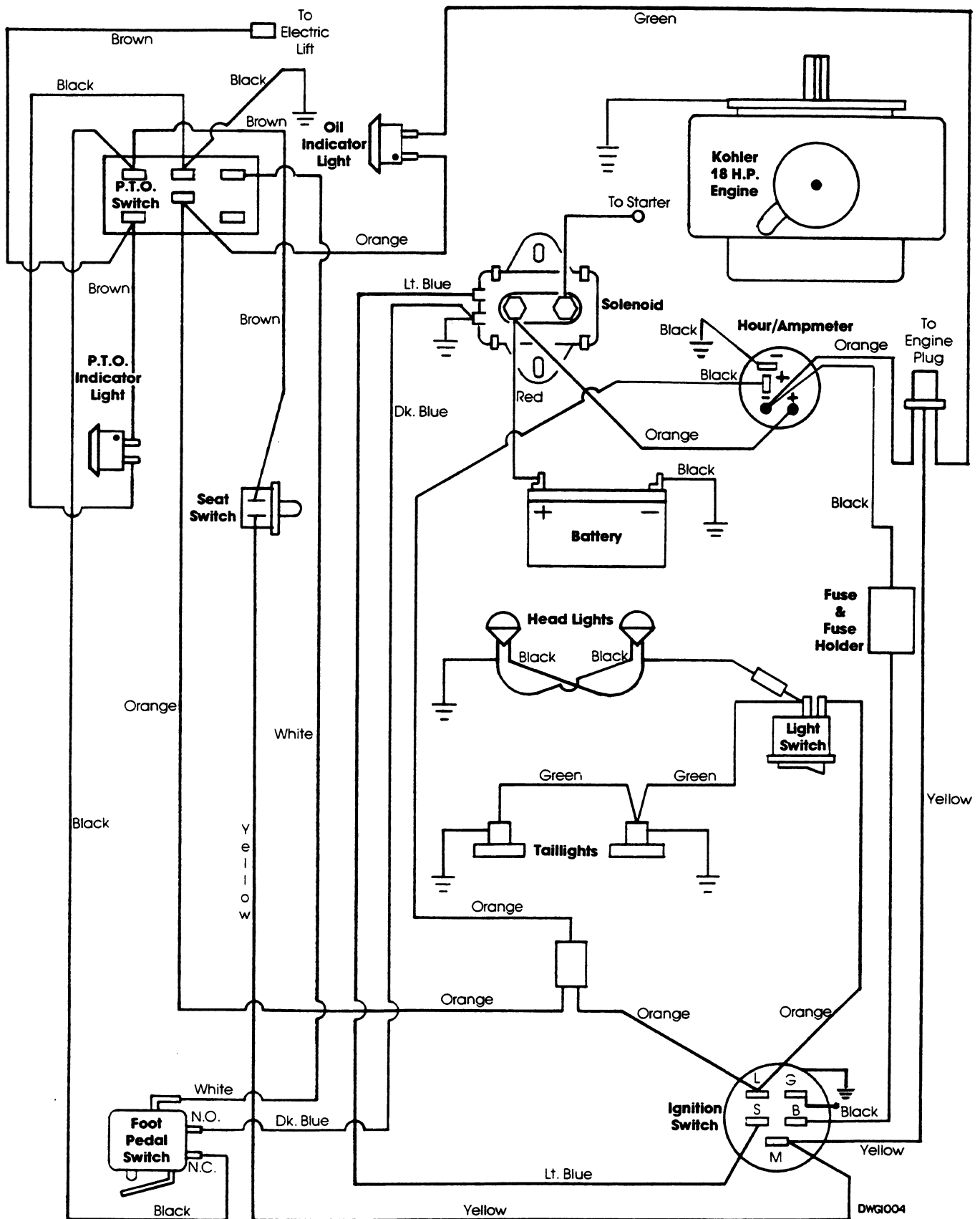
DWG1003

# WIRING DIAGRAM MODEL 09GN2208

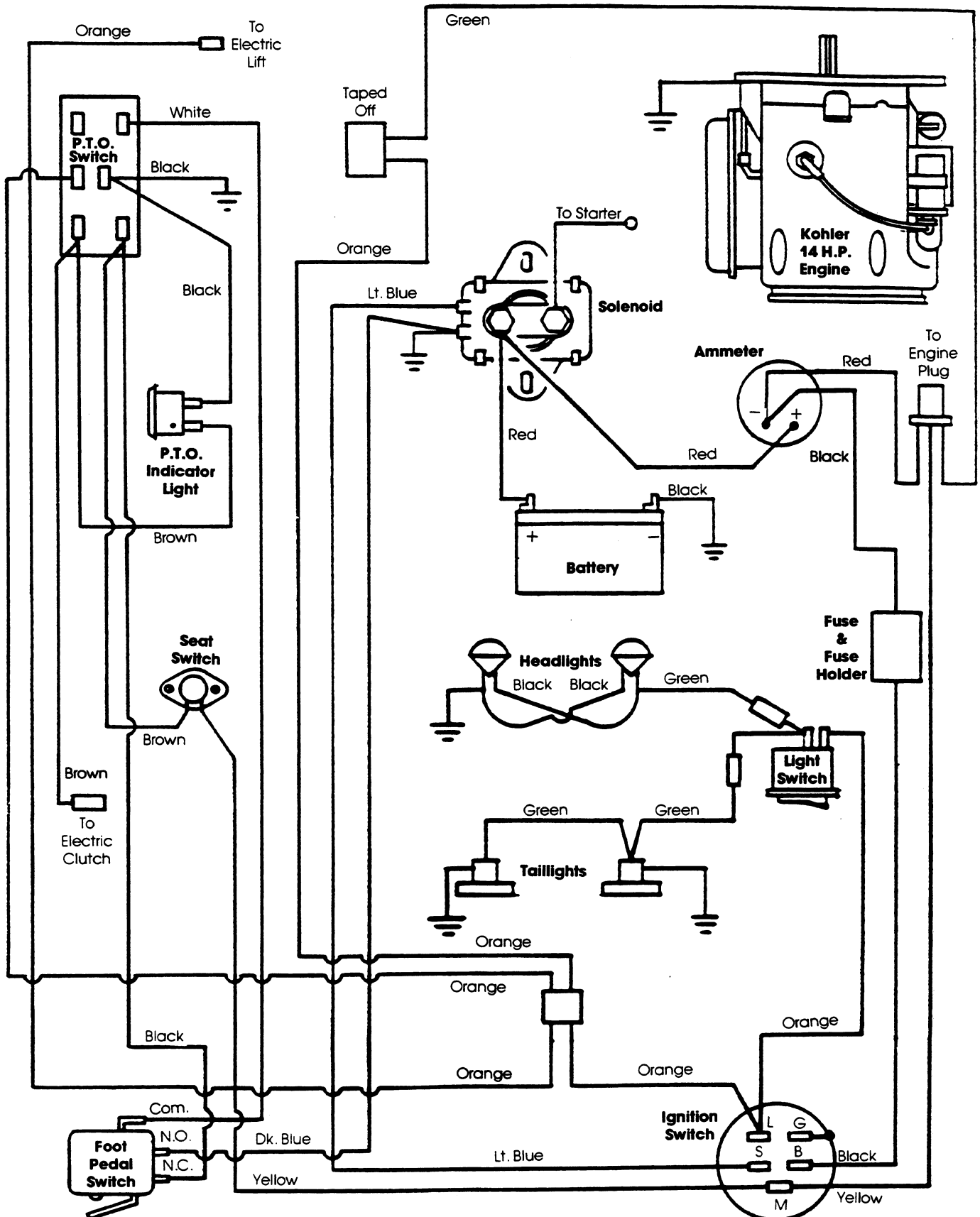


DWG1003

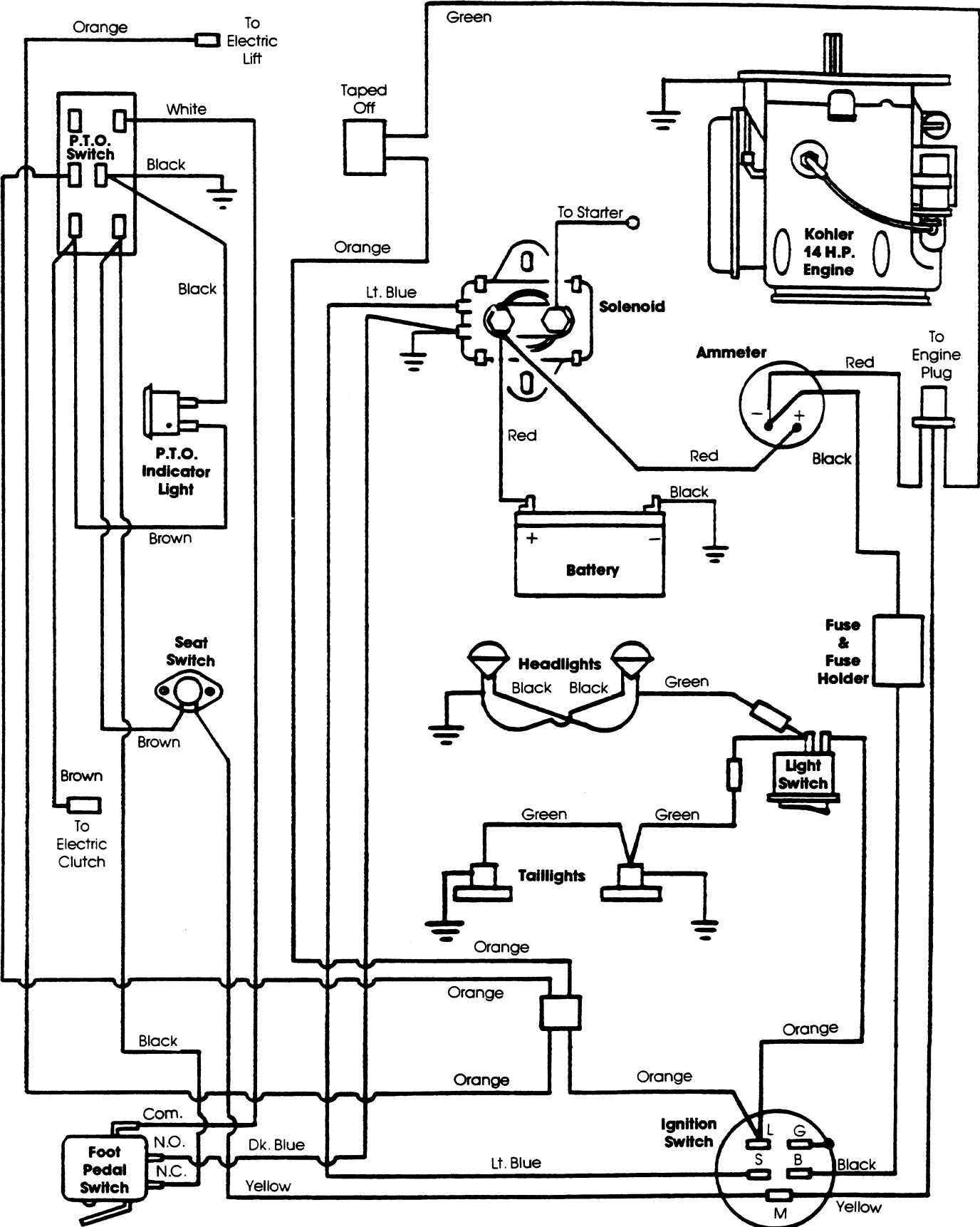
# WIRING DIAGRAM MODEL 09GN2209



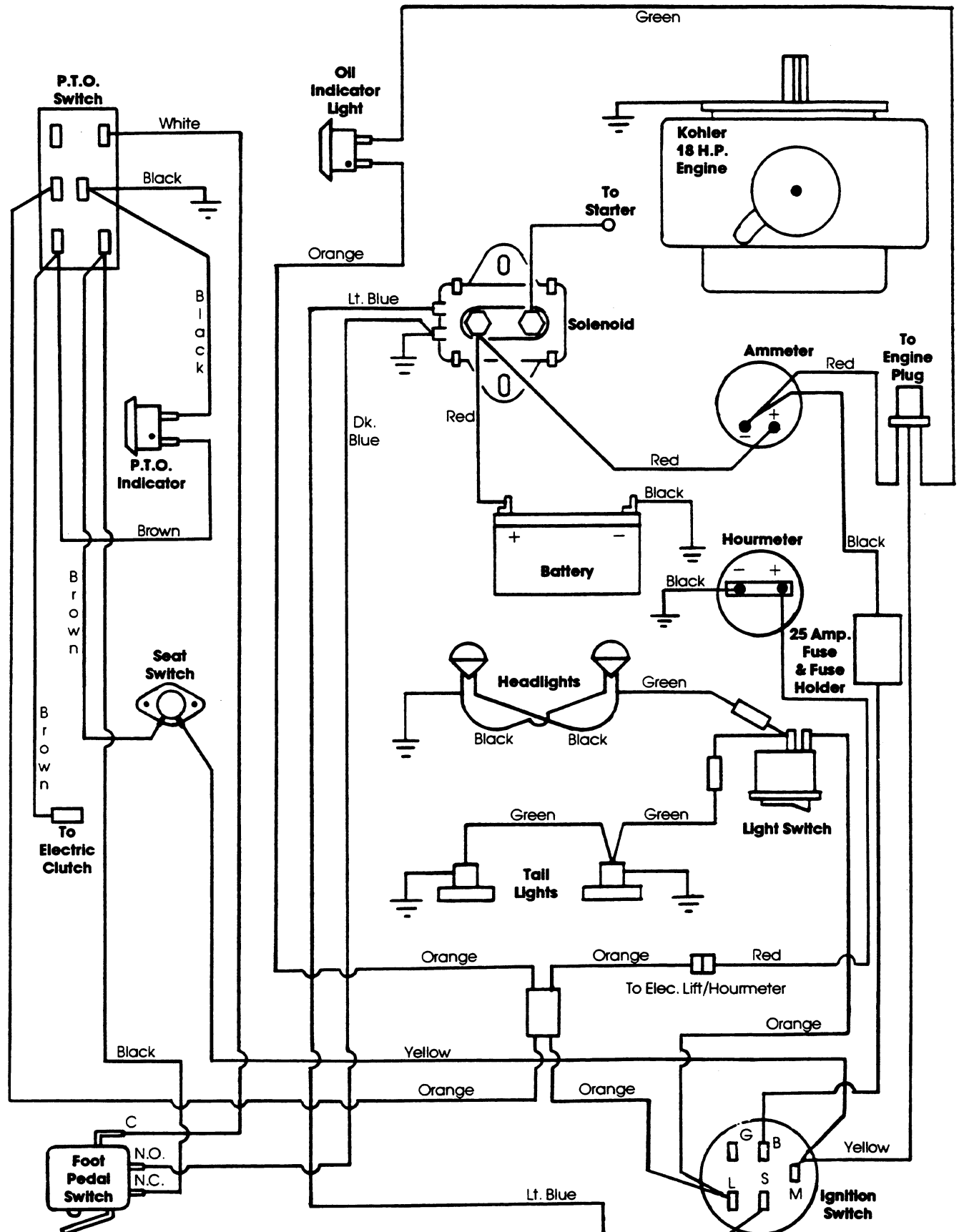
# WIRING DIAGRAM MODEL 09GN2210



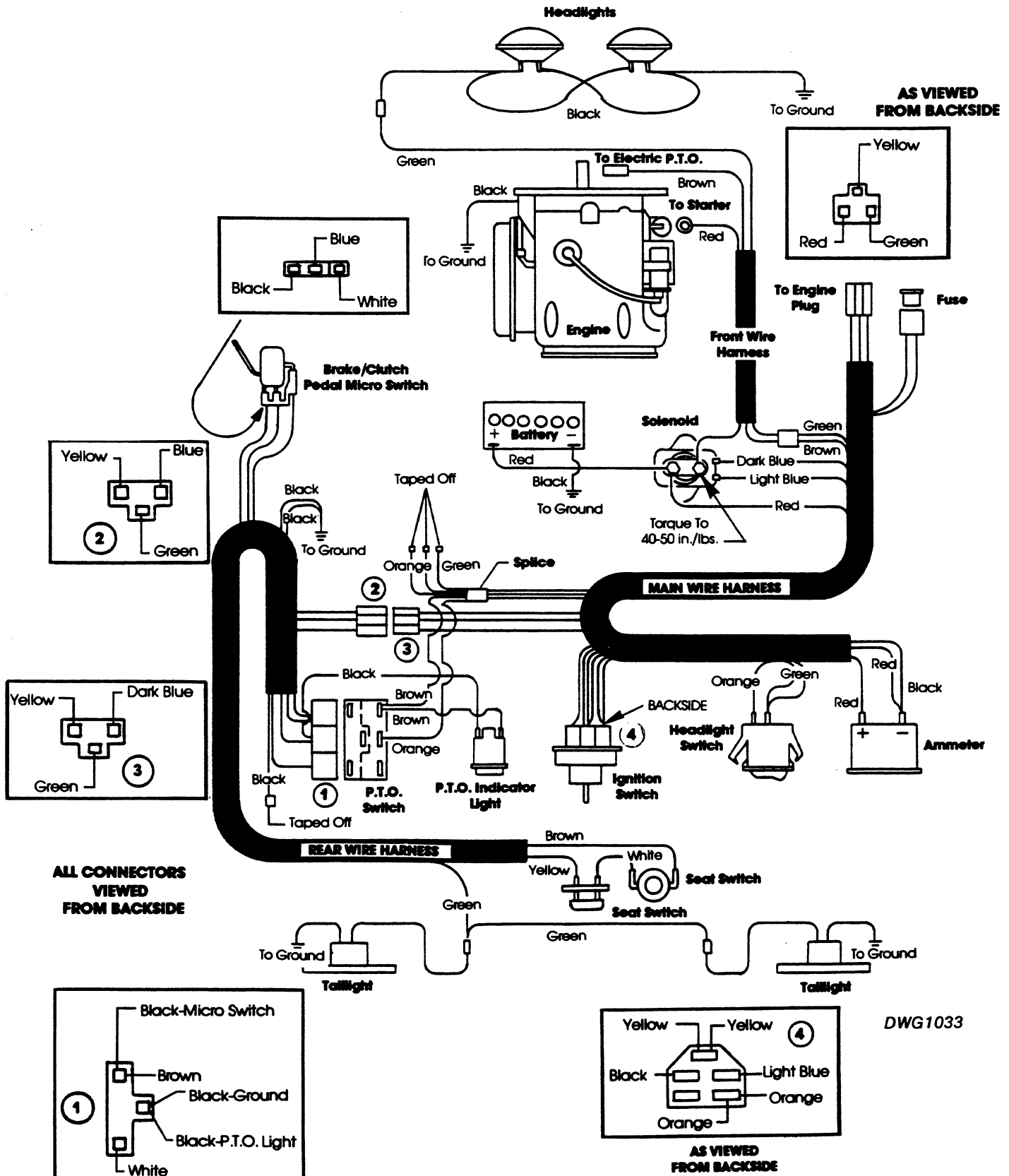
WIRING DIAGRAM MODEL 09GN2211



# WIRING DIAGRAM MODEL 09GN2212

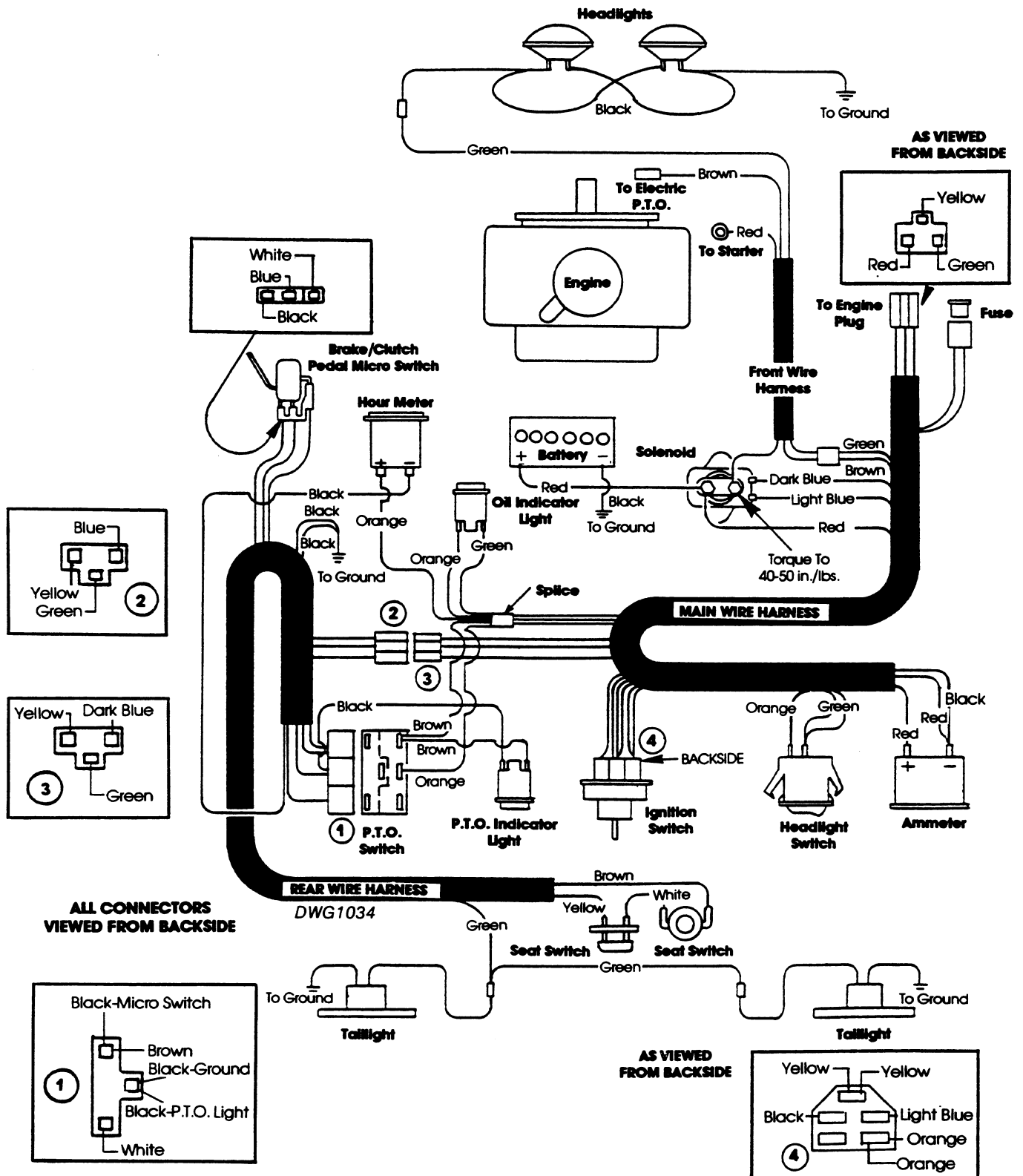


# WIRING DIAGRAM MODEL 9607433

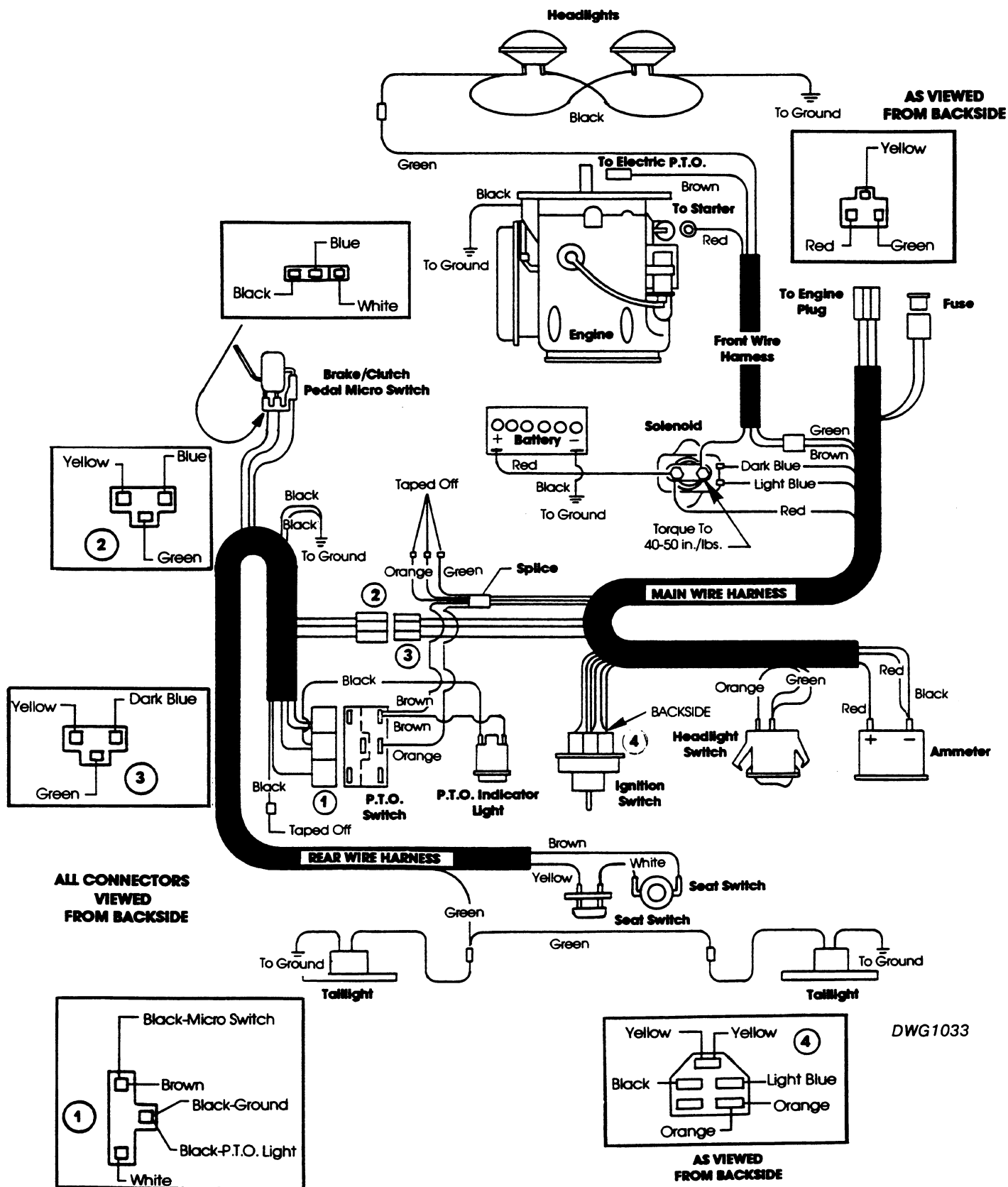




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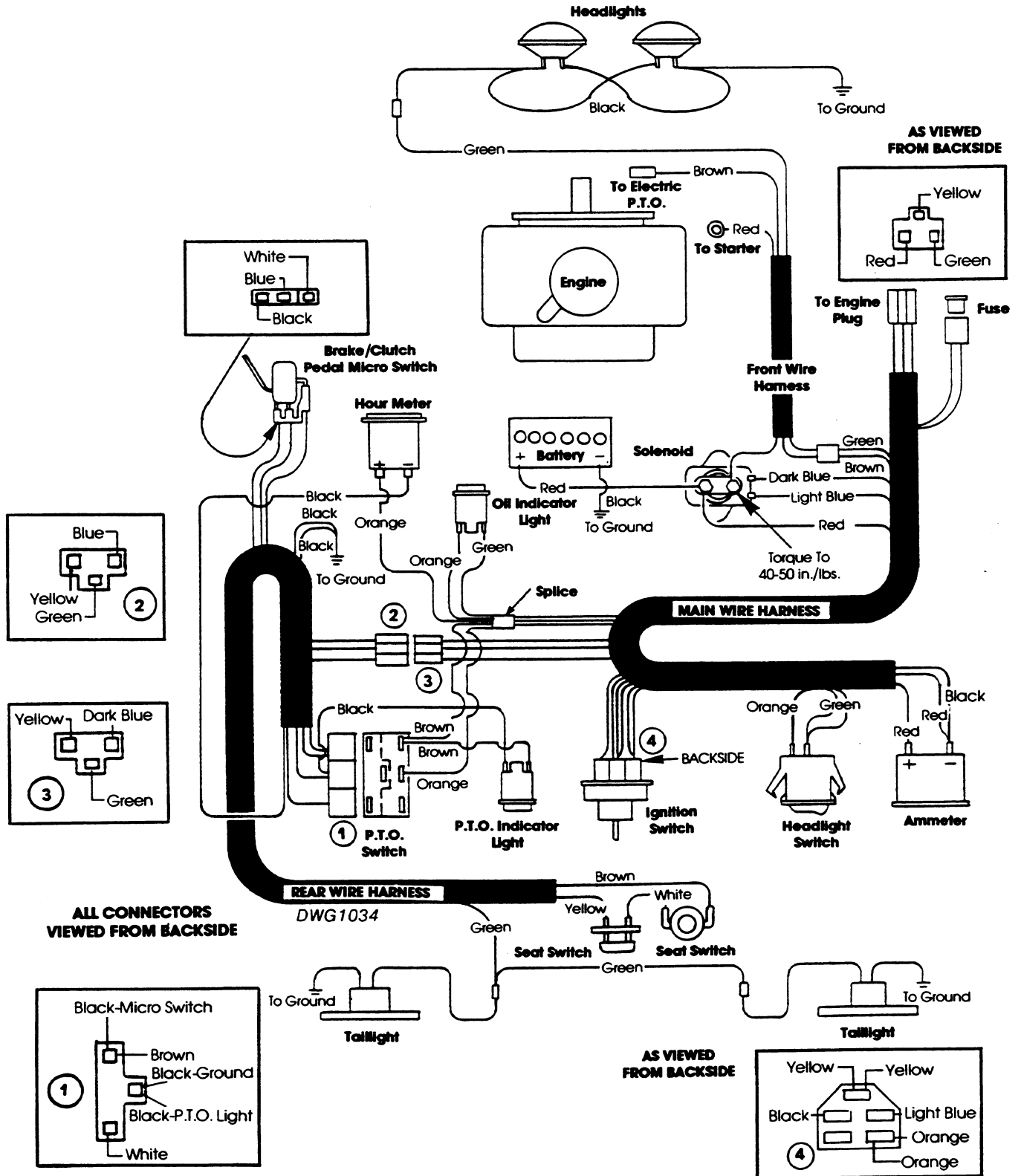


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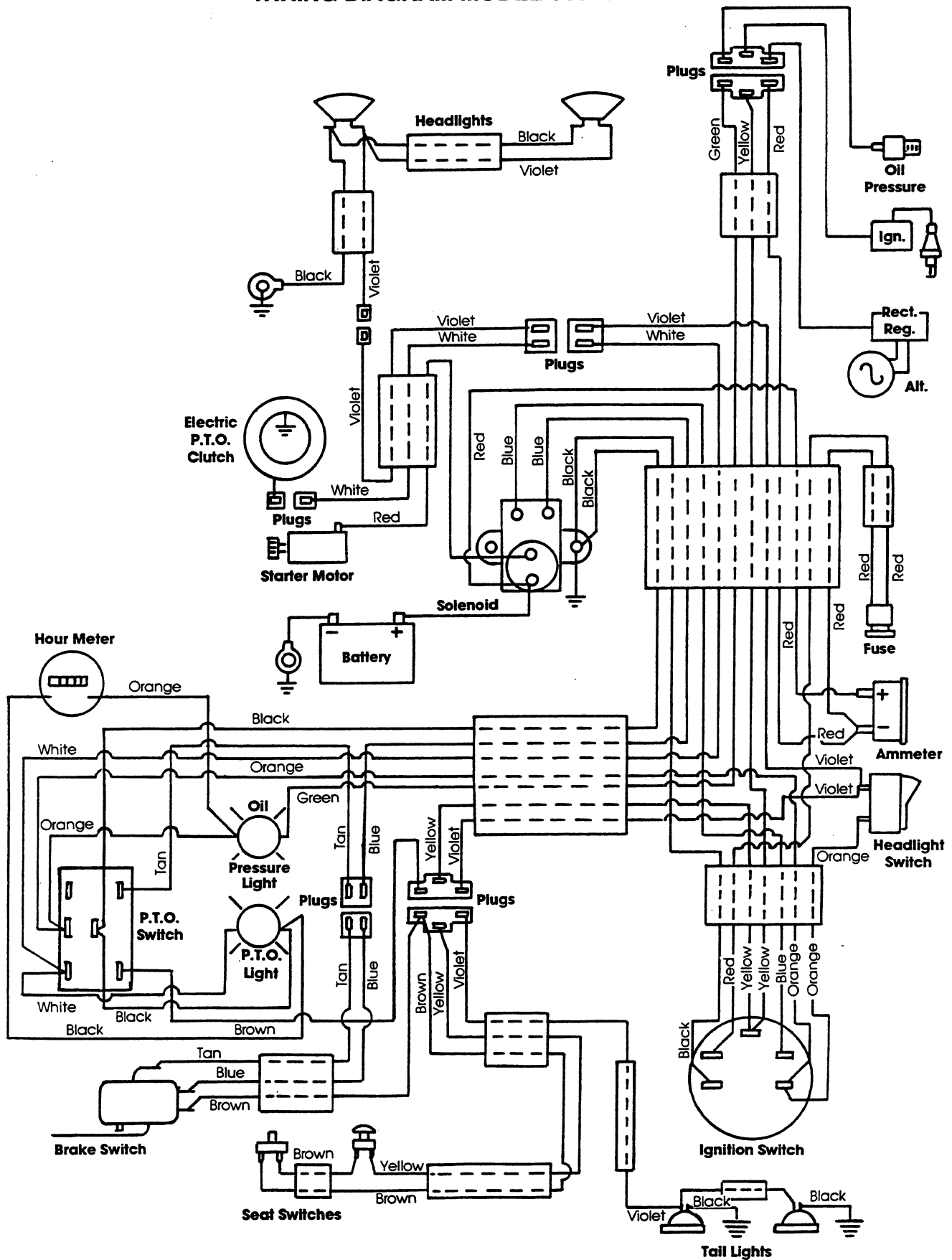


DWG1033

# WIRING DIAGRAM MODEL 9607483



# WIRING DIAGRAM MODEL 9801811



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**IMPORTANT:** The replacement of any part on this product by other than the manufacturers' authorized replacement part may adversely affect the performance, durability or safety of this product.

The manufacturer reserves the right to make changes on and to add improvements upon its products at any time without notice or obligation. The manufacturer also reserves the right to discontinue manufacture of any product at its discretion at any time.

Notice to Serviceman in the State of California — The engine on this unit is NOT equipped with a spark arresting muffler.

**IMPORTANT:** USE OR OPERATION OF THIS ENGINE ON ANY FOREST COVERED, BRUSH COVERED, OR GRASS COVERED LAND WITHOUT A STATE APPROVED SPARK ARRESTOR IN EFFECTIVE WORKING ORDER CONSTITUTES A VIOLATION OF THE LAW OF THE STATE OF CALIFORNIA.

# LGT TRACTORS

## INTRODUCTION

This manual contains service and maintenance instructions for Lawn and Garden Tractor (LGT). It has been prepared to provide the information the serviceman needs to correctly service and maintain a LGT Tractor. All sections of this manual should be carefully studied by the serviceman before beginning work on the tractor.

ALL WARNINGS used throughout this manual should be heeded and followed very closely. Failure to obey these rules could result in personal injury or death to yourself or others.

All references made to the left side, right side, front and rear are given from the operator's position.

## SAFETY



**Safety is No Accident . . . . . Be Alert!**

**This symbol is used to attract your attention to the safety precautions that should be understood by the serviceman to avoid accidents.**

Please read and follow these instructions on safety procedures before servicing the tractor.

### PERSONAL CONSIDERATIONS:

1. Never let shop rags, used for cleaning, lay around to become fire hazards.
2. Always use safety glasses when servicing or inspecting the tractor.
3. Do not wear loose fitting clothing that might get caught in moving parts. Also, keep hands and feet away from moving parts.
4. Be certain that the work bench or support being used is strong enough. The weight of the part plus the force applied to it during assembly or disassembly may put a great strain on the bench or support.
5. Use jack stands or blocks to hold up the unit in any potentially dangerous positions required for access. Do not rely only on jack for support.

### EQUIPMENT CONSIDERATIONS:

1. Always disconnect spark plug wire and secure away from spark plug. This **must** be performed every time any servicing is done and will prevent accidental starting of engine.
2. Always store gasoline or flammable solvents used for cleaning in closed containers specifically designed for that purpose.
3. Before cleaning, servicing or inspecting tractor, make certain all moving parts have stopped and engine and exhaust assemblies have cooled down.

4. Never operate tractor without proper guards, plates or other safety protective devices in place.
5. Never store tractor with gasoline in the tank, inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
6. Disengage power to attachment(s) and stop engine before servicing, repairing or making any adjustments.
7. Disengage power to attachment(s) when transporting or not in use.
8. Take all possible precautions when leaving the vehicle unattended, such as disengaging the power-take-off, lowering the attachment, shifting into neutral, setting the parking brake, stopping the engine and removing the key.
9. Do not change governor setting or over speed the engine.
10. Be certain that any part being removed is properly supported or held to prevent injury or damage.

### OPERATIONAL CONSIDERATIONS:

1. Do not start or run the engine indoors. Fumes from engine exhaust can kill.
2. Disengage all clutches and place gear shift lever in neutral before attempting to start engine.
3. Be sure that all parts are securely fastened before starting tractor.
4. Be sure all tools and cleaning materials are removed before starting tractor.
5. If the equipment should start to vibrate abnormally, stop engine and check immediately for the cause. Vibration is generally a warning of trouble.
6. If test running is required, make sure you are thoroughly familiar with the complete operation of the tractor. Know how to stop the tractor.
7. Never operate machine at high transport speeds on slippery surfaces. Use care when backing.
8. Never operate without good visibility or light.



Whenever you see this symbol it means:  
**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

## IDENTIFICATION PLATE LOCATION

The tractor model and serial number identification plate is located on the left side of engine base assembly below the engine. (Fig. 1)

Refer to engine manufacturer's engine literature for location of engine model and serial number.

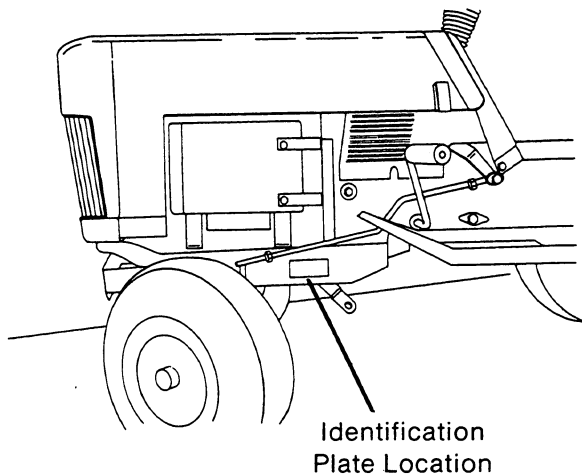


FIG. 1

1.0001

## MAINTENANCE

1. GENERAL - Make a visual inspection for loose or damaged parts. Check nuts and bolts periodically to insure against looseness caused by vibration or rough handling. Damaged parts should be repaired or replaced.
2. BATTERY - Terminals should be tight and free of corrosion. Battery hold down bracket should be snug over battery. Top of battery should be clean and dry. Check level of electrolyte. Add clean distilled water as needed.
3. TIRE PRESSURES - Recommended tire pressure for both front and rear tires is 10 p.s.i.
4. P.T.O. WARNING LIGHT - Periodically check the operation of this light. Check as follows:
  - a. Turn ignition switch to "RUN" position. (DO NOT start engine)
  - b. Move P.T.O. switch to "ON" position. NOTE: Warning light should come on.
  - c. Move P.T.O. switch to "OFF" position. NOTE: Warning light should turn off.
  - d. Turn ignition switch to "OFF" position.






**WARNING: Proper operation of this light is mandatory. Personal bodily injury may occur if light is not operating properly. Reference "ELECTRICAL SYSTEM - P.T.O. WARNING LIGHT" for servicing.**

5. BELT (Gear Drive Units **Only**) - Inspect traction drive belt for cracking, excessive wear and for proper tension. Refer to "ADJUSTMENT AND SERVICING - TRACTION DRIVE BELT" section to check belt tension.



# BOLT TORQUE SPECIFICATIONS

The following chart lists the standard torque specifications for all capscrews and thread forming screws used in this unit. Unless **special** torques are called for, all torque values must meet these specifications.

	TYPE OF CAPSCREW	SAE GRADE 2		SAE GRADE 5		SAE GRADE 5		SAE GRADE 2 OR 5 ALSO THREAD FORMING SCREWS	
	TYPE OF FASTENER USED								
	TORQUE FACTOR	FT./LBS. MIN.      MAX.		FT./LBS. MIN.      MAX.		FT./LBS. MIN.      MAX.		FT./LBS. MIN.      MAX.	
SCREW SIZE	1/4	5	7	9	11	5	7	5	7
	5/16	9	14	18	22	9	14	9	14
	3/8	16	24	30	40	16	24	16	24
	7/16	25	37	50	60	25	37	25	37
	1/2	38	57	75	95	38	57	38	57
	5/8	73	110	150	185	73	110	73	110

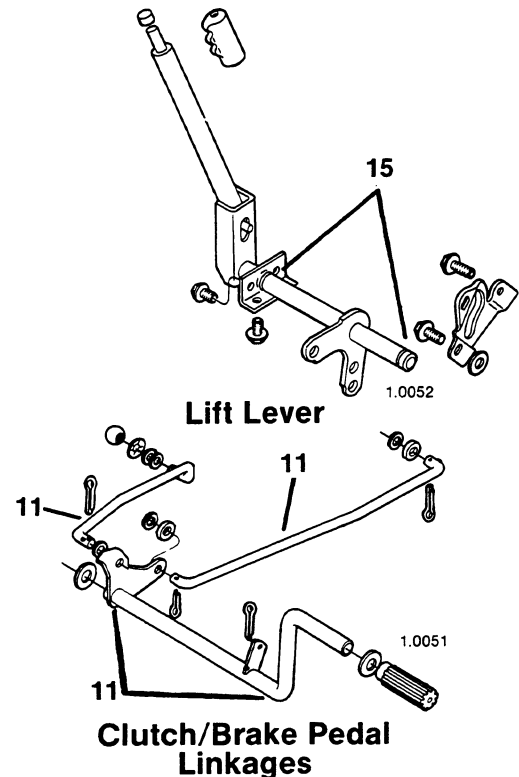
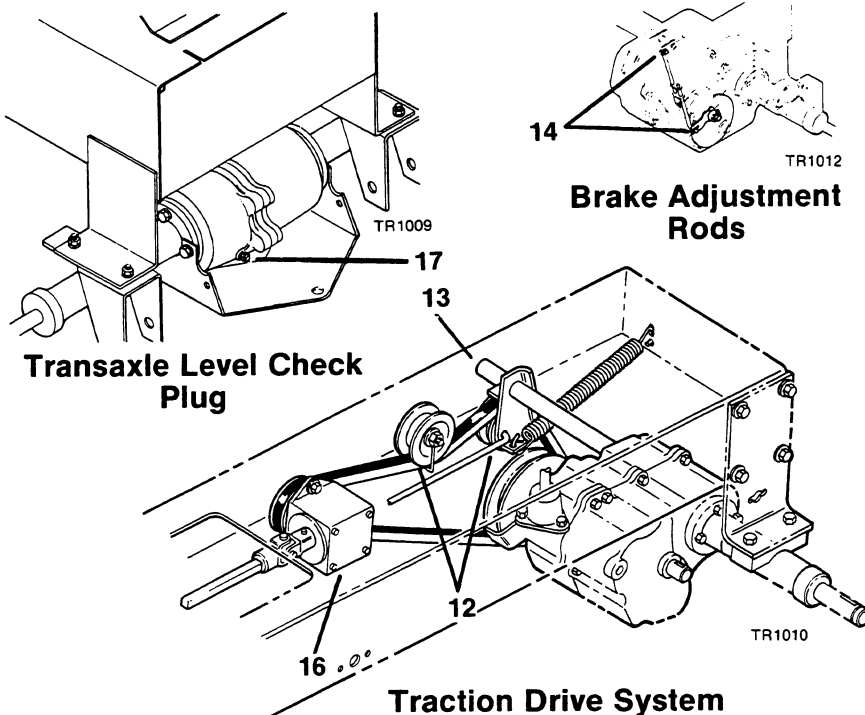
# LUBRICATION CHARTS

**WARNING:** To avoid accidental starting, disengage power to attachment(s) and stop the engine and remove the ignition key before lubricating tractor.

## LGT and LGT 17 (Gear Drive Tractors)

LUBE POINT	LOCATION	LUBRICATION	INTERVAL			REMARKS
			DAILY	25 HRS.	100 HRS.	
1	Engine oil level	Per Eng. Mfg.	●			Check before each use of tractor.
2	Engine air filter		●			Check daily if operating under dusty conditions. Normally inspect every 50 hrs.
3	Engine oil change	Per Eng. Mfg.		●		Break-in, change after first 5 hrs. thereafter every 25 hrs. (more often under dusty conditions).
4	Axle pivot	Grease*		●		Pump slowly until grease seeps out.
5	Tie rod	Grease*		●		Pump slowly until grease seeps out.
6	Front wheel spindles	Grease*		●		Pump slowly until grease seeps out.
7	Front wheels	Grease*		●		Pump slowly until grease seeps out.
8	Steering sector gear & pinion	Grease*		●		Apply liberally to gear teeth.
9	Steering assembly bushing	SAE 30 Oil		●		Few drops of oil in each bushing.
10	Front (Mule drive) idler pulleys	SAE 30 Oil		●		Few drops of oil in each bearing. DO NOT get oil in pulley groove or on belt.
10A	Drive Shaft	SAE 30 Oil			●	Few drops of oil on square shaft that slides in front universal joint.
11	Clutch/Brake pedal shaft	SAE 30 Oil		●		Both end of clutch/brake shaft. Both ends of parking brake link and clutch rod.
12	Traction drive pulleys	SAE 30 Oil		●		Few drops of oil in bearings of flat and v-idler pulleys. DO NOT get oil in pulley groove or on belt.
13	Clutch/Brake arm shaft	SAE 30 Oil		●		Both ends of shaft.
14	Brake adjustment rods	SAE 30 Oil		●		Linkage pivot points.
15	Attachment lift lever shaft	SAE 30 Oil		●		Both ends of shaft.
16	90° Traction drive gear box	Moly EP Lithium Grease			●	Periodic visual inspection for leaks. Fill with 4 oz. of grease after rebuilding.
17	Transaxle	EP 140 wt. SAE Oil			●	Periodic visual inspection for leaks. Capacity 4 pints.

\*Grease—NLGI Grade 2 Lithium base EP grease (Ford 1T-M1C137-B). Grease with hand pump grease gun when required.

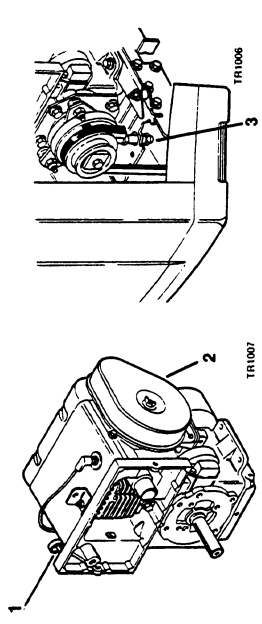


LGT 12H and LGT 17H (Hydro Drive Tractors Models 09GN2202 & 2204 Only)

LUBE POINT	LOCATION	LUBRICATION	INTERVAL			REMARKS
			DAILY	25 HRS	100 HRS	
1	Engine oil level	Per Eng. Mfg.	●			Check before each use of tractor.
2	Engine air filter		●			Check daily if operating under dusty conditions. Normally inspect every 50 hrs
3	Engine oil change	Per Eng. Mfg.		●		Break-in, change after first 5 hrs, thereafter every 25 hrs (more often under dusty conditions).
4	Axle pivot	Grease*		●		Pump slowly until grease seeps out.
5	Tie rod	Grease*		●		Pump slowly until grease seeps out.
6	Front wheel spindles	Grease*		●		Pump slowly until grease seeps out.
7	Front wheels	Grease*		●		Pump slowly until grease seeps out.
8	Steering sector gear & pinion	Grease*		●		Apply liberally to gear teeth.
9	Steering assembly bushings	SAE 30 Oil		●		Few drops of oil in each bushing.
10	Front (Mule drive) idler pulleys	SAE 30 Oil		●		Few drops of oil in each bearing. DO NOT get oil in pulley groove or on belt.
10a	Drive Shaft	SAE 30 Oil			●	Few drops of oil on square shaft that slides in front universal joint.
11	Lift valve cavity	Grease*		●		Pack cavity, level with grease.
12	Lift valve clevis	SAE 30 Oil		●		Few drops of oil on clevis pin.
13	Lift cylinder pivot ends	SAE 30 Oil		●		Few drops of oil on each pivot pin.
14	Lift arm shaft	SAE 30 Oil		●		Few drops of oil on each end of shaft.
15	Clutch/Brake pedal shaft	SAE 30 Oil		●		Few drops of oil on each end of shaft.
16	Neutral rod assembly	Grease*		●		Apply grease around entire slot.
17	Neutral rod at speed control lever, square slot	Grease*		●		Apply grease around entire slot.
18	Speed control lever at neutral spring finger notch	Grease*		●		Spread grease over entire curved surface of speed control lever.
19	Parking brake ratchet	Grease*		●		Spread grease on all ratchet teeth.
20	Parking brake link & bushing	SAE 30 Oil		●		Few drops of oil in bushings and on both ends of linkage.
21	Drive lever bushings & linkage	SAE 30 Oil		●		Few drops of oil in bushings and on both ends of linkage.
22	Hi/LO speed range pivot bushing	SAE 30 Oil		●		Few drops of oil in bushing.
23	Hi/LO speed range lever shifting end	Grease*		●		Spread grease around slot and on shift pin.
24	Brake adjustment rod	SAE 30 oil		●		Few drops of oil at both ends of rod.
25	Oil filter			●	(20 hrs)	Break-in, change after first 20 hrs, thereafter every 100 hrs.
26	Transmission & Transaxle	SAE 20 wt. detergent oil				Periodic visual inspection for leaks. Check oil level at "plug and dipstick". Capacity 6 quarts.

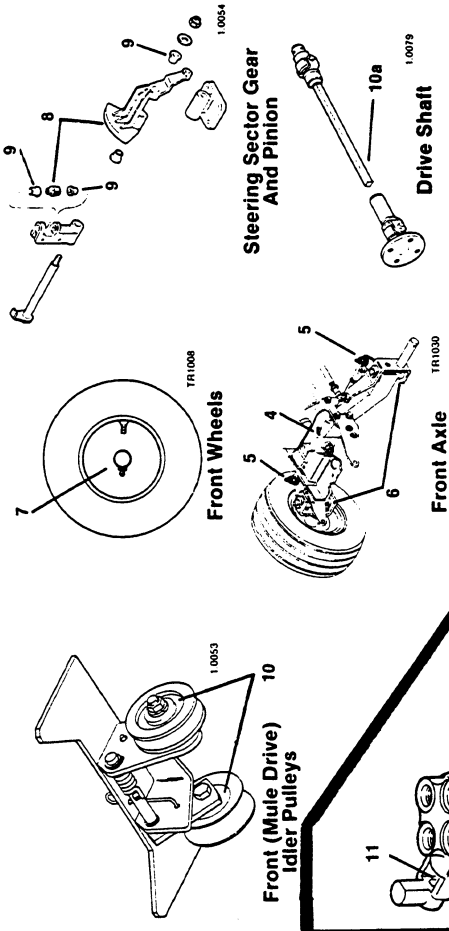
\*Grease—NLGI Grade 2 Lithium base EP grease (Ford T-M1C137-B).

\*\*SAE 20 wt. "SE" Oil. Mil. Spec. No. L2104B.



17 H.P. Kohler Engine

12 H.P. Kohler Engine



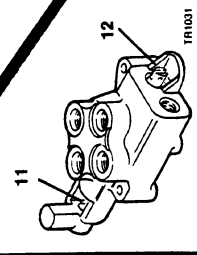
Front (Mule Drive) Idler Pulleys

Front Wheels

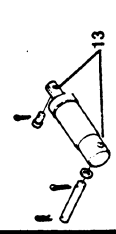
Steering Sector Gear And Pinion

Front Axle

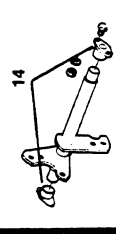
Drive Shaft



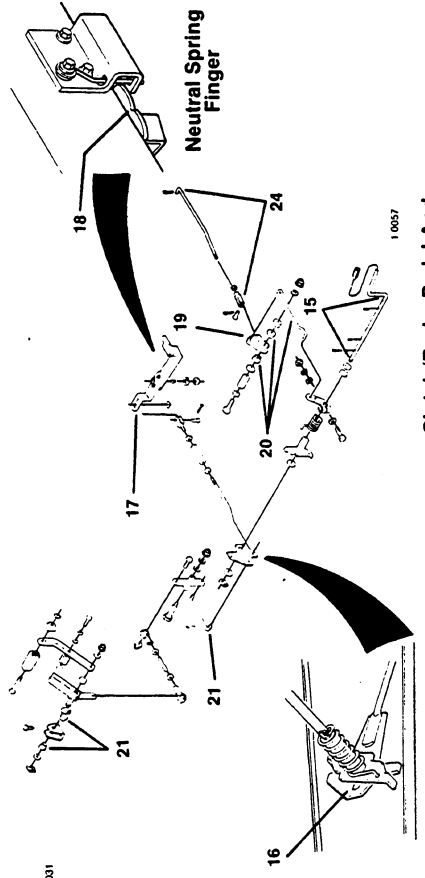
Lift Valve



Lift Cylinder



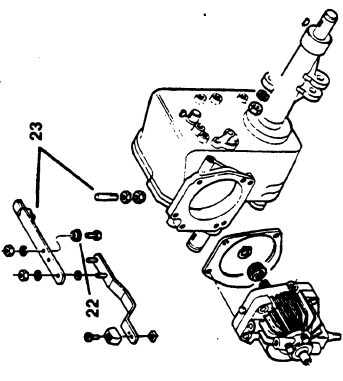
Lift Arm Shaft



Neutral Spring Finger

Clutch/Brake Pedal And Drive Lever Linkages

Neutral Rod Assembly



Transmission And Transaxle

Transaxle Fill Plug And Oil Filter

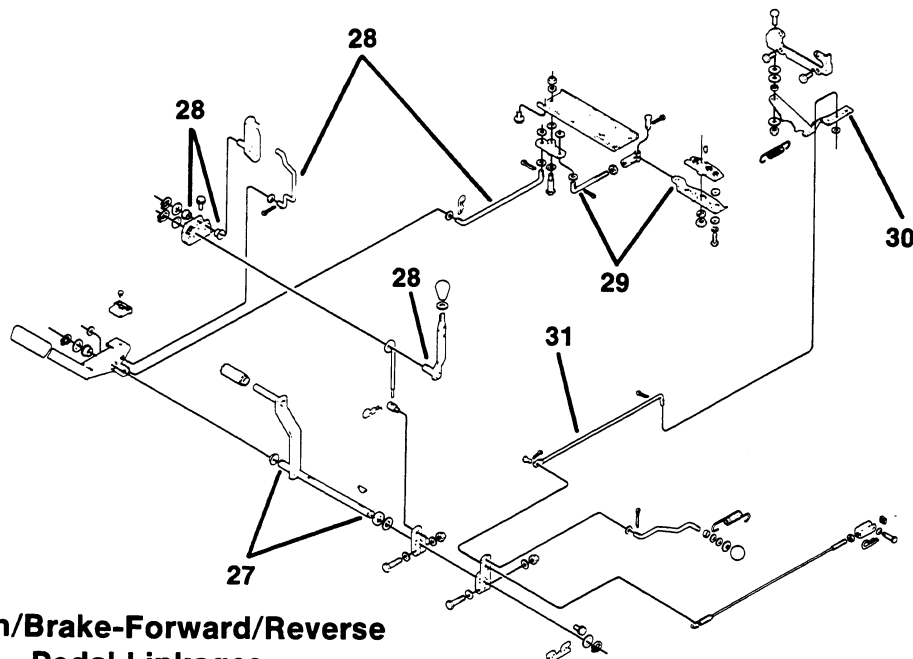
# LGT 12H and LGT 17H (Hydro Drive Tractors Models 09GN2205 & 2206 Only)

LUBE POINT	LOCATION	LUBRICATION	INTERVAL			REMARKS
			DAILY	25 HRS.	100 HRS.	
1	Engine oil level	Per Eng. Mfg.	●			Check before each use of tractor.
2	Engine air filter		●			Check daily if operating under dusty conditions. Normally inspect every 50 hrs.
3	Engine oil change	Per Eng. Mfg.		●		Break-in, change after first 5 hrs. thereafter every 25 hrs. (more often under dusty conditions).
4	Axle pivot	Grease*		●		Pump slowly until grease seeps out.
5	Tie rod	Grease*		●		Pump slowly until grease seeps out.
6	Front wheel spindles	Grease*		●		Pump slowly until grease seeps out.
7	Front wheels	Grease*		●		Pump slowly until grease seeps out.
8	Steering sector gear & pinion	Grease*		●		Apply liberally to gear teeth.
9	Steering assembly bushings	SAE 30 Oil		●		Few drops of oil in each bushing.
10	Front (Mule drive) idler pulleys	SAE 30 Oil		●		Few drops of oil in each bearing. DO NOT get oil in pulley groove or on belt.
10a	Drive Shaft	SAE 30 Oil			●	Few drops of oil on square shaft that slides in front universal joint.
11	Lift valve cavity	Grease*		●		Pack cavity, level with grease.
12	Lift valve clevis	SAE 30 Oil		●		Few drops of oil on clevis pin.
13	Lift cylinder pivot ends	SAE 30 Oil		●		Few drops of oil on each pivot pin.
14	Lift arm shaft	SAE 30 Oil		●		Few drops of oil on each end of shaft.
22	Hi/LO speed range pivot bushing	SAE 30 Oil		●		Few drops of oil in bushing.
23	Hi/LO speed range lever shifting end	Grease*		●		Spread grease around slot and on shift pin.
25	Oil filter			● (20 hrs)	●	Break-in, change after first 20 hrs, thereafter every 100 hrs.
26	Transmission & Transaxle	SAE 20 wt. detergent oil			●	Periodic visual inspection for leaks. Check oil level at "plug and dipstick". Capacity 6 quarts.
27	Clutch/Brake pedal shaft	SAE 30 Oil		●		Few drops on each end of shaft.
28	Speed control lever bushings & linkage	SAE 30 Oil		●		Few drops of oil in bushings and on both ends of linkage.
29	Transmission shift linkage	SAE 30 Oil		●		Few drops of oil at both ends of rod.
30	Neutral return lever	Grease*		●		Apply grease around entire slot.
31	Neutral release rod	SAE 30 Oil		●		Few drops of oil at both ends of rod.

\*Grease—NLGI Grade 2 Lithium base EP grease (Ford 1T-M1C137-B).

Grease with hand pump grease gun when required.

\*\*SAE 20 wt. "SE" Oil, Mil. Spec. No. L2104B.



**Clutch/Brake-Forward/Reverse  
Pedal Linkages**

1.0074

# ADJUSTMENTS AND SERVICING

**ATTENTION:** All procedures listed in this section for adjustments and servicing of the tractor are described with the **attachment removed**. Reference "ATTACHMENTS" section of this service manual for all information specific to the attachment mounted on this tractor.

## ENGINE:

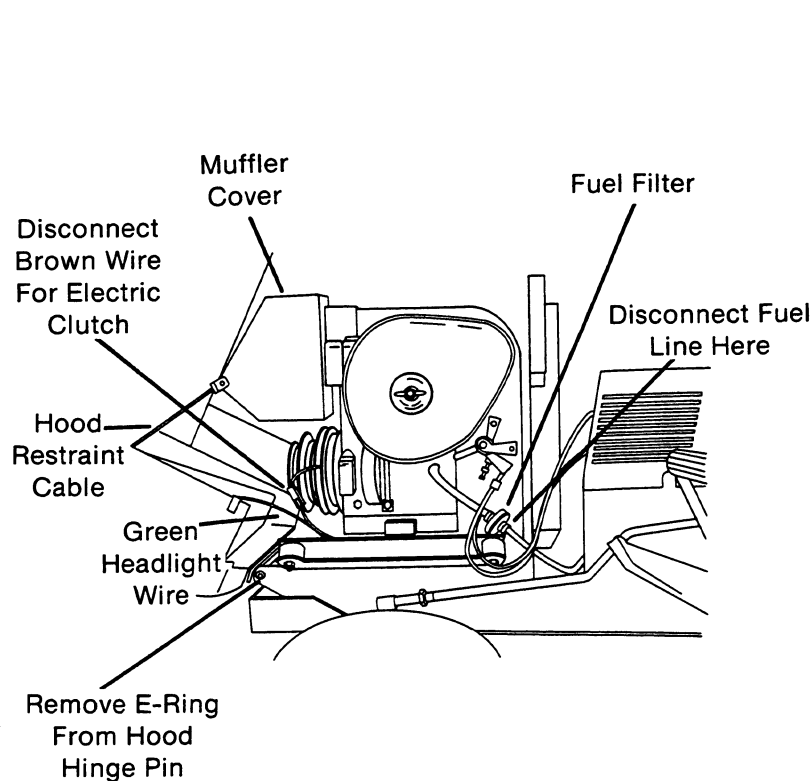
1. Refer to Engine Manufacturer's Service Manual for all adjustments and servicing information.
2. Maximum engine RPM high speed, no load, range is 3300 RPM to 3500 RPM.
3. **12 H.P. Engine Removal —**



**WARNING:** To avoid accidental starting, remove spark plug wire and secure away from spark plug. Turn ignition switch "OFF".

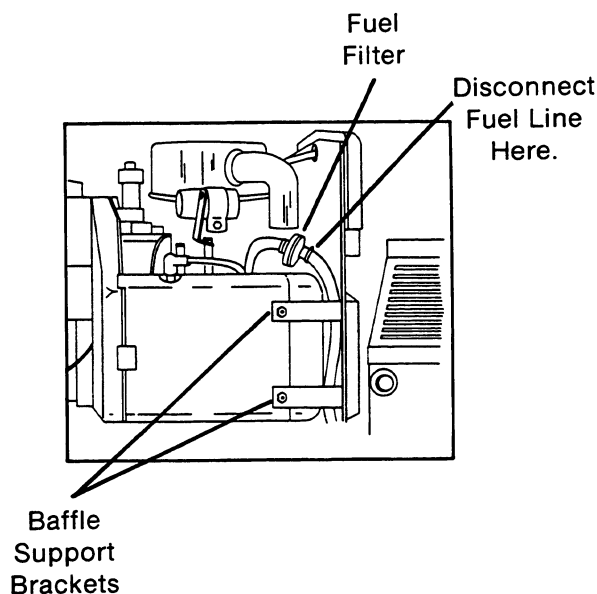


**WARNING:** To avoid severe burns, **DO NOT** attempt this procedure when engine is hot. Wait for engine and muffler to cool down before proceeding.



**12 H.P. ENGINE**

- A. Before this procedure is performed, the attachment should be removed from this tractor as outlined in "ATTACHMENT" section of this service manual.
- B. Unclip hood latches and raise hood. Disconnect green wire at connector located at left bottom corner of hood. (Fig. 2)
- C. Disconnect hood restraint cable connected to left front corner of muffler cover. (Fig. 2) Lower hood back onto tractor.
- D. Remove one E-ring from end of hood hinge pin. (Fig. 2) Remove hinge pin completely from hood hinge. Remove hood.
- E. Disconnect black battery cable at negative (-) battery terminal. Secure cable away from battery.
- F. Disconnect the following lead wires at engine:
  - a. Brown wire connected to electric clutch at lower left front corner of engine. (Fig. 2)



**17 H.P. ENGINE**

**FIG. 2**

- c. Remove cap on solenoid and disconnect red starter wire at solenoid. (Fig. 3)

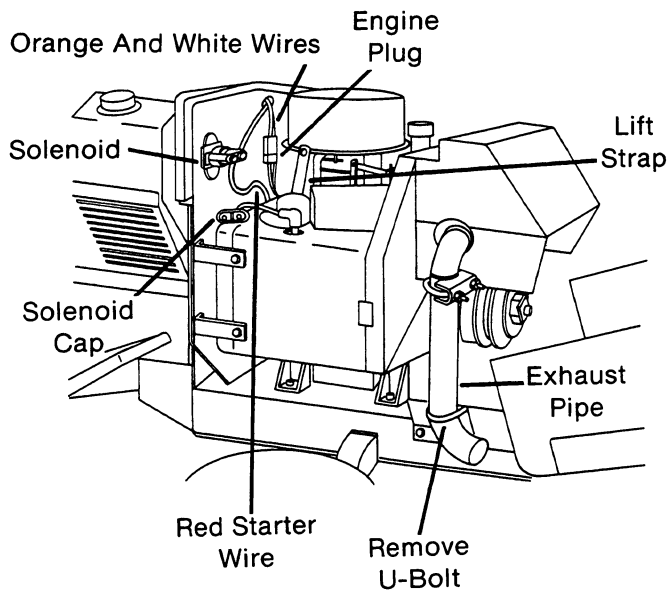


FIG. 3

- G. Remove two nuts and lockwashers on U-bolt securing exhaust pipe to engine mounting bracket. (Fig. 3)
- H. Disconnect fuel line at fuel filter. (Fig. 2) Cap line to prevent leakage. Remove fuel filter from fuel line and inspect or replace filter per engine manufacturer's specifications.
- I. Loosen cable clamp screws, securing throttle and choke cables to left side of engine, far enough so both cables can be removed. (Fig. 4) Unhook throttle cable end (inner cable) from throttle speed control lever. Unhook choke cable end (outer cable) from choke lever.
- J. (Gear Drive Tractors Only) Loosen two setscrews on rear of drive shaft. (Fig. 5)

(Hydro Drive Tractors Only) Remove one long setscrew thru notch in fan hub on rear of drive shaft. Rotate fan to expose second short setscrew, loosen setscrew. (Fig. 5)

Push or pry drive shaft forward until rear universal joint comes off of gear box or transmission shaft.

Sample Manual. Download All 121 pages at:

<https://www.arepairmanual.com/downloads/new-holland-lawn-and-garden-tractors-service-repair-manual/>

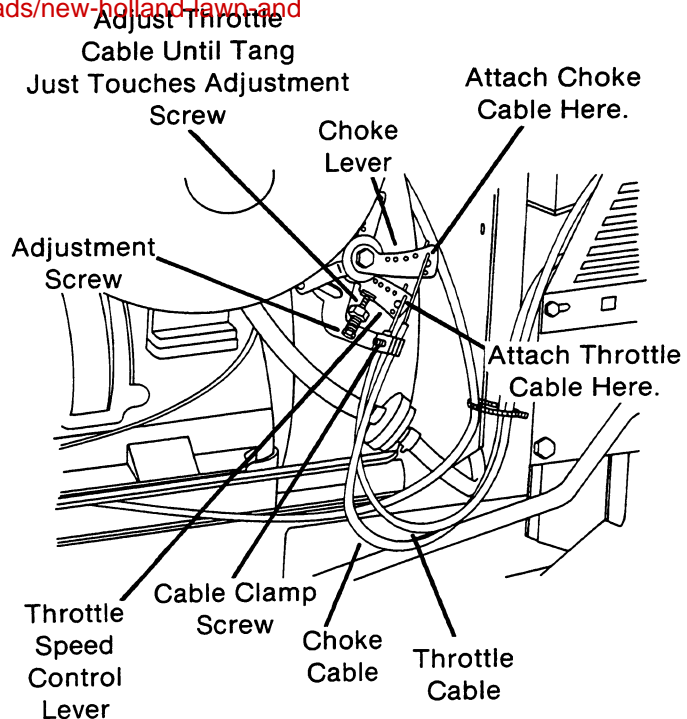


FIG. 4

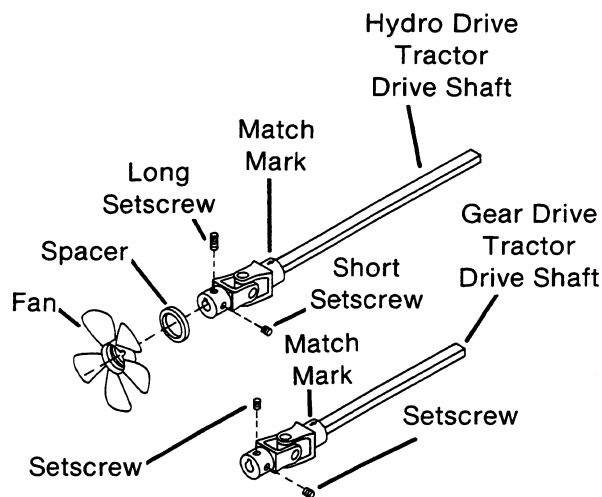


FIG. 5

- K. Make a chalk mark on front universal joint and a matching mark on rectangular drive shaft so these parts can be mated together the same way during reassembly.

NOTE: Lubricate drive shaft with 30 wt. oil during reassembly.

NOTE: Drive shaft is a balanced assembly and **must** be reassembled the same way it was removed. Match marks (arrows) are stamped into both front and rear universal joints, if chalk marks are not made, to insure proper reassembly. (Fig. 5)