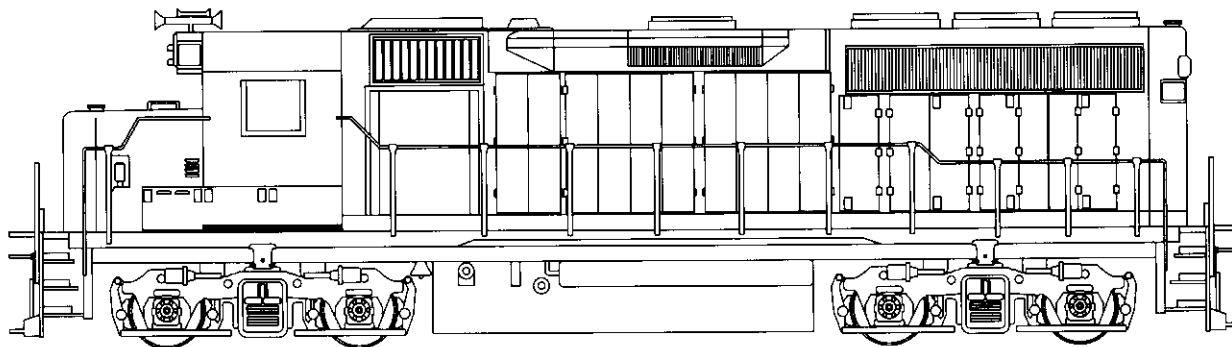


EMD GP-40 DIESEL LOCOMOTIVE

INSTRUCTION MANUAL

ART-23500 - 01



ARISTO-CRAFT TRAINS

060807 NEW

ARISTO-CRAFT TRAINS

Dear Model Railroader,

This EMD GP-40 Diesel locomotive is a highly detailed #1 gauge 1/29th scale unit and is suitable for indoor and outdoor operation. It has been designed and manufactured to our usual high specifications.

Should you have any questions regarding operation, proper usage or maintenance required on this or any other Aristo-Craft product, please do not hesitate to contact us at the following address:

ARISTO-CRAFT TRAINS / Polk's Modelcraft Hobbies, Inc.

698 South 21st Street, Irvington, NJ 07111 USA

Tel: (973) 351-9800 Fax: (973) 351-9700

e-mail: aristo@mindspring.com

Our customer service department phones are open from 10:00 AM to 5:00 PM Eastern time, Monday through Friday.

Visit our website: www.aristocraft.com

HISTORY

The Electro-Motive Division of General Motors produced the GP-40 locomotive starting in 1965 to 1971 and was replaced by the nearly identical GP-40-2 model. The locomotive was powered by a EMD 645E3, 16-cylinder engine which generated 3000 horse power. Over 1,200 GP-40 models were built for use on American, Canadian and Mexican railroads for both Freight and Passenger Service.

Today GP-40 Diesels are still very popular and widely used in all types of service including passenger service on commuter railroads. Some GP-40's are now starting to find there way onto tourist railroad and into museums for preservation.

FEATURES

- Two 2 axle ball bearing efficient power trucks.
- Modular electrical connections and car body.
- Operating smoke unit.
- Interior cab lighting and details.
- Operating marker, walkway, and classification lights.
- Solid metal railings and lift rings.
- Clear plastic windows.
- Super detailing including windshield wipers, see through steps and cooling fans.
- Operating AAR knuckle couplers.
- Prototypical painting, lettering and road numbers.
- Quality water resistant speaker included for the sound system of your choice.

All features subject to change.

MINIMUM OF 6.5 FOOT DIAMETER CURVES REQUIRED

NOTES:

- For the purpose of this manual, the cab end of the locomotive is considered the “front” end.
- All information in this manual is subject to change. Refer to any supplement material provided with locomotive or posted on the Aristo-Craft website (www.aristocraft.com) for updates or changes.
- Additional weight should be added to this locomotive only upon the recommendations and area specified by Aristo-Craft. Adding weight may cause damage to the locomotive and may void the warranty.
- Detail parts are fragile and should always be considered during handling.
- Due to train dynamics and requirements of other locomotives and cars, minimum diameter may be greater than 6.5 feet. Always use minimum diameter (or larger) curve for train operation. See page 13 for track requirements.
- The MU plugs alongside the couplers on the ends of the locomotive are intended for battery operations only. These can be used to electrically link the locomotive to a trailing car or other locomotives equipped with MU plugs with the use of **ART-29607 MU connector**.

SAFETY INFORMATION

- This model locomotive is an electric device. Like with all electric devices, proper care and respect of electricity must be kept at all times.
- Do not handle locomotive while power is being provided. Turn off and disconnect all electrical power sources before handling locomotive.
- Make sure power switches are in the "OFF" position when placing locomotive on tracks or connecting the locomotive to a power source.
- Proper adult supervision is necessary for all children.
- Do not attempt to handle locomotive while in use. Grabbing, holding locomotive or blocking locomotive's path while in motion may cause injury.
- **Do not turn the locomotive upside down or on its side when the smoke fluid reservoir contains smoke fluid. Smoke fluid may leak out and may be hot enough to cause injury.**

POWER SWITCHES

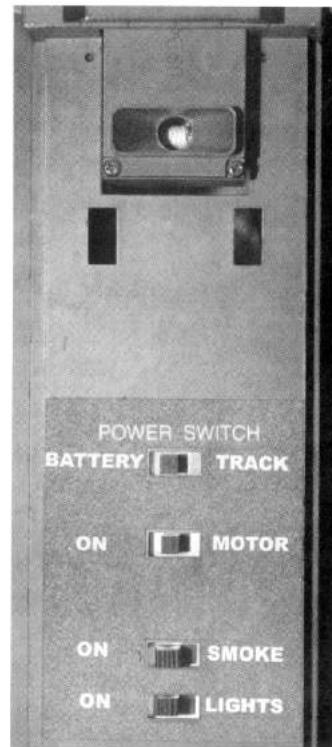
The four power switches are located beneath the rectangular roof hatch containing the exhaust stack of the locomotive.

Remove the hatch by pulling it up to expose the four switches. There are no screws or latches as the hatch is a press fit. See the diagram for the position and function of each switch.

With the front of the locomotive facing away from you, the first or top switch selects track or battery power. In the right hand position the locomotive will run on battery power, in the left hand position, the locomotive will run only on track power.

For the lower three switches, left is on, right is off.

The next switch turns the motors on or off. The third switch turns the smoke units on or off. The bottom, or last switch controls the locomotive's lights.



SMOKE GENERATOR UNIT

The smoke generator unit is situated beneath the exhaust stack, located on the roof. Before filling the smoke fluid reservoir, turn the smoke unit switch to the off (right) position (see page 7). Using Crest smoke fluid, **CRE-29601**, fill the reservoir with at least 25 but **no more than 50 drops**. Turn the smoke switch to the on (left) position before operation.

The smoke generator contains an automatic cut-off circuit that will prevent the unit from burning out if it becomes too hot or if it runs out of fluid. Should the unit turn itself off, move the smoke unit switch to the off position, allow the unit to cool for a few minutes and refill with smoke fluid, if necessary. Move the smoke switch to the on position to restart.

Note: The smoke generator units has been made to be used only with Crest brand smoke fluid, CRE-29601. Use of other brands of smoke fluid or other fluids may void warranty.

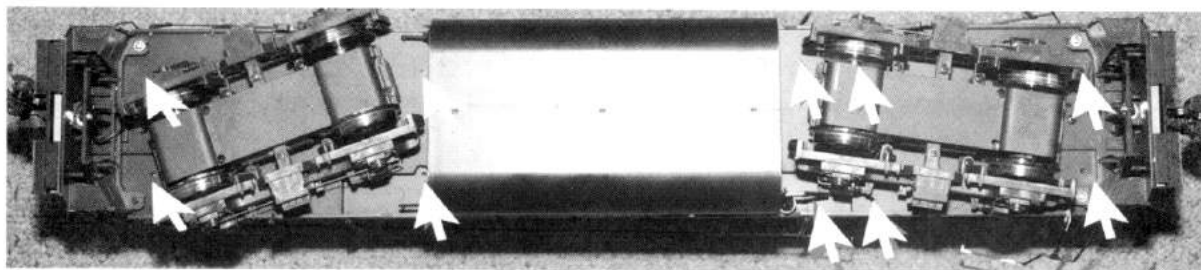
CAUTION: DO NOT TURN THE LOCOMOTIVE UPSIDE DOWN OR ON ITS SIDE WHEN THE SMOKE FLUID RESERVOIR CONTAINS SMOKE FLUID. SMOKE FLUID MAY LEAK OUT AND MAY BE HOT ENOUGH TO CAUSE INJURY.

BODY SHELL REMOVAL

In order to reach the speaker and PC board, it is necessary to separate the under frame from the body of the locomotive.

The body shell is secured to the under frame with 10 Phillips-type screws. See the photo below. The white arrows indicate the locations of the screws.

Care should be taken to not damage the fragile detail parts and steps when handling and turning the locomotive on it's roof. Use of a padded locomotive holding cradle is recommended.

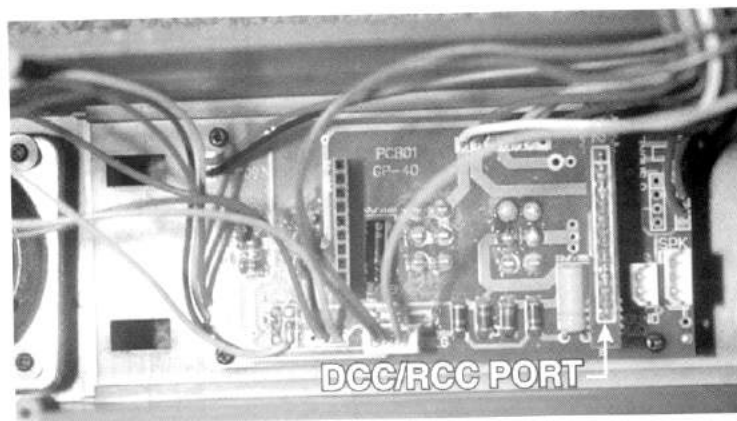


CAUTION: DO NOT TURN THE LOCOMOTIVE UPSIDE DOWN OR ON ITS SIDE WHEN THE SMOKE FLUID RESERVOIR CONTAINS SMOKE FLUID. SMOKE FLUID MAY LEAK OUT AND MAY BE HOT ENOUGH TO CAUSE INJURY.

DCC/RCC INSTALLATION

This locomotive is equipped with a DCC/RCC (digital command control / radio command control) port and dummy plug. After purchasing the control system of your choice, be sure to read the instructions carefully. In order to install your DCC/RCC system, the dummy plug must be removed and the DCC/RCC plug inserted in its place. The DCC/RCC port is located on the main PC board of the unit. See the diagram of the main PC board (below) for the location of the DCC/RCC port. **In order to reach the PC board, it is necessary to separate the under frame from the body of the locomotive (see page 9).** The board is directly below the switch panel.

For RCC operations, we recommend the CREST On-Board Train Engineer Radio Control System CRE-55492.



SOUND SYSTEM

This locomotive is equipped with a factory installed speaker. The speaker is mounted inside the locomotive body shell. Below the roof. After purchasing a sound system for this unit, install it according to the manufacture's instructions. The sound system may have two female plugs, one with three sockets, the other with two sockets. These are plugged into the pins on the main PC board. See the diagram on page 10 for the location of these pins. The three pin plug is for the speaker, the two pin plug is for the power to the sound system. In order to install the sound system, access the main PC board as was done for the DCC/RCC installation. In order to access the speaker and PC board, it is necessary to separate the underframe from the body of the locomotive (see page 9).

BATTERY OPERATION

This locomotive has been equipped to operate either from track power or from battery power. The selection switch is located on the switch panel (see page 7). With the switch in the right position the locomotive will run on track power. With the switch in the left position, it will use battery power.

There are modular plugs or “MU Plugs” alongside of each coupler. These plugs will link the locomotive to a trailing car containing batteries.

NOTE: The MU plugs alongside the couplers on the ends of the locomotive are intended for battery operation only. These can be used to electrically link the locomotives to a trailing car or other locomotives equipped with MU plugs with the use of ART-29607 MU connector.

AUTO-RESETTING FUSE

This locomotive is equipped with an auto-resetting fuse. This fuse helps protect the locomotive from overheating and electrical shorts. If the fuse trips, the locomotive will cease operating. The fuse will reset after few moments and the locomotive will begin operating again.

In the event the auto-resetting fuse in this locomotive trips, shut off and disconnect all power sources to the locomotive. Allow the locomotive adequate time to cool. Inspect the locomotive, the tracks its operating on and the electrical system (power supply, batteries, control system, wire, etc.) for damage, foreign objects or any possible source of electrical short before reapplying power to the locomotive. Do not start operating the locomotive again until the cause that tripped the locomotive’s fuse is found and resolved.

TRACK REQUIREMENTS

When running by itself or coupled to another locomotive or cars, the GP-40 requires an absolute minimum track diameter of 6.5'. While individual experiences may vary, this is a large locomotive and curve diameter less than 6.5' may cause derailments and side clearance problems. Smaller diameter curves will also cause cars coupled to the locomotive to derail or be pulled completely off the track.

Note: Due to train dynamics and requirements of other locomotives and cars, minimum diameter may be greater than 6.5'. Always use the minimum curve requirements from the locomotive or car requiring the greatest curve diameter when setting the minimum diameter curve for train operation.

COUPLERS

This locomotive is equipped with prototypically accurate, operating knuckle couplers. These couplers are factory installed and may be operated manually by pressing upward on the small tab below the coupler assembly.

LIMITED WARRANTY

All ARISTO-CRAFT TRAINS products are under warranty for five (5) years from the date of purchase against defects in workmanship and/or materials. **Proof of purchase may be required by ARISTO-CRAFT TRAINS.**

Breakage or damage caused by extended use, and items considered to be normal wear and tear by normal use may not be covered under this warranty, and coverage is subject to the discretion of Aristo-Craft Trains.

This warranty is void and does not apply to any product and/or parts and components which have been improperly installed by the purchaser/owner, abused or damaged in any way through improper operation such as but not limited to derailment, repairs or modifications performed by non-authorized service centers or technicians.

SERVICING

Should your ARISTO-CRAFT TRAINS product require warranty service, please return it in the original box, if possible, protected by a proper shipping carton. Send the product fully insured and prepaid. ARISTO-CRAFT TRAINS will not be responsible for any loss or damage incurred during shipping. Be sure to include a brief, but thorough explanation of the problem, together with your name, street address (no Post Office box please), city state or province and country, if outside of the United States. Also include a daytime telephone number so that we may contact you if necessary. Your return address should be clearly marked on the outside of the shipping carton.

Payment for shipping and handling, in U.S. funds, is \$20.00 and should be included. Your check or money order should be made payable to: Polk's Modelcraft Hobbies, Inc. Do not send cash. If your item is not covered by warranty service, you will be contacted and a repair estimate given before any work commences. Warranty covers manufacturer defects, not normal wear and tear.

The shipping address to be used for returns is as follows:

ARISTO-CRAFT TRAINS / Polk's Modelcraft Hobbies, Inc.
Customer Service Department
698 South 21st Street
Irvington, NJ 07111 USA
Tel: (973) 351-9800

Written confirmation of receipt of returned items will be sent with estimated repair time by the ARISTO-CRAFT TRAINS Customer Service Department.



www.aristocraft.com

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