

MAINTENANCE, LUBRICATION & HOW TO REMOVE SHELL

LUBRICATION

The ScaleTrains SD45 Locomotive represents hours of careful research and design work, and we are proud to present it to you. With the right care, it should provide years and years of model railroading enjoyment. Out of the box, the model should be ready for service, no lubrication should be necessary; it has been carefully lubricated at the factory for optimum performance. However, if the need to lubricate should arise, please follow these guidelines:

- Be sure to use a plastic-compatible lubricant! Most household lubricants, such as "3-in-1" type oils, may damage the slippery engineering plastic found in the driveline of the model. Wherever possible, use lubricants designed specifically for model railroad or similar hobby uses, and if in doubt, check the label for any compatibility warnings.
- Use the right type of lubricant in the right location! For metal-to-metal bearing surfaces, the use of light or medium oils is recommended. For plastic-to-plastic applications, such as gears, light greases are recommended.
- Always use lubricant sparingly! As the saying goes, a little goes a long way. When applying lubricant to bearing surfaces, a tiny drop or dab applied with a fine point, such as a toothpick, should be more than sufficient. Any excess lubricant oozing from a bearing surface should be carefully wiped away with a paper towel.

Lubrication points will be the same as would be expected in most any model locomotive. On the locomotive power trucks the bearing is behind the wheel so a small drop of light plastic compatible oil can be used behind each wheel as necessary. The interior of the model is filled with circuit boards and wiring for the many features of your SD45 locomotive so great care must be taken when applying lubrication to areas that may require lubrication inside the locomotive. Refer to the disassembly instructions and exploded diagrams (available on our webpage) to understand how to remove the body to access the inner workings of the locomotive. Lubrication points inside the model would be the motor bearings, where a small drop of oil between the motor ends and the brass flywheels, on the motor shaft, will be sufficient. The other location would be the at the worm shafts on the top of the gearboxes. These too can use a small drop of oil at both ends of the shaft. One end being where the driveshafts are attached to the metal worm shaft and the other being the opposite end where the shaft slightly protrudes out of the bearing. Grease can be applied to the gear box gear by removing the worm cover and then the worm and shaft. Once the worm and shaft are removed a small amount of grease can be applied to the top gear box gear, the one that contacts the worm gear then the worm and worm cover can be reinstalled. As the locomotive runs the grease will be distributed inside the gearbox to all the gears. Whenever possible, avoid contact of lubricants with the model's exterior finish. Oils and greases can possibly harm the factory paint and lettering; any excess that may make contact should be gently wiped away with a paper towel or other fine cloth. Due to the delicate nature of the interior components inside the locomotives if there is any concern it may be best to contact your local dealer or contact us directly to help guide you through the lubrication process.

HANDLING

Due to the delicate nature of the model, it is advised that care should be taken when removing the model from its packaging, and placing it onto your test track or layout. Carefully remove the locomotive blister from the box. To remove the locomotive, carefully slide off the outer sleeve from the "clamshell" plastic holder cradling each unit, and set it aside.

Next, unsnap the plastic clamshell holder; note that at one end is hinged, and designed to snap into the top half of the holder. Do this on a flat surface, to reduce the risk of the clamshell or the model slipping from your grip and falling to the floor. Once the clamshell is fully open, carefully remove the model. There are two plastic brackets on the bottom of the trucks to help secure the model in the blister. These are a friction fit on the bottom of the trucks. Remove these before attempting to put the locomotive on the tracks. When putting the model back in the box simply reverse the process to place it back into its packaging for storage. NOTE: Pay close attention to the model's orientation in the clamshell container. The model will only fit correctly one way. Improper placement may result in the Damage of small detail parts on the model. When handling the model, it is recommended that it is gripped firmly at its mid-section, avoiding the fine stirrup steps, doors, grab irons, or other small details that may be present.

DISASSEMBLY

When disassembling the locomotive, it is recommended that it is placed upside-down into a foam cradle to protect it from damage. In order to remove the body simply remove the coupler box screws, couplers and coupler boxes. Some models may require the removal of the snowplow. They are attached with a white glue and should be easily removed. Reattach the snowplow using a white glue so that if necessary the snowplow can be removed again if needed. Once the screws and coupler boxes are removed the body shell can now be removed from the mechanism. There are no wires or other connections between the body and chassis so gently lifting up on the body, paying attention to the many details, should allow the body to be easily removed from the chassis. Take great care when setting the body down as to not damage all the delicate parts. At this point maintenance can be preformed. To install crew figures, first gently detach the handrails from the cab. There is a tab at the top rear of the cab where it connects to the long hood. Once the handrails are detached the cab can lift up vertically. This will take a small amount of force to pop the tab loose to allow the cab to come up. To reinstall the cab and body just reverse the process.

CLEANING

If kept out of its protective packaging for extended periods, it is likely your SD45 may accumulate dust or other debris. While unsightly, it can also potentially damage the finish of the model if allowed to accumulate. To remove light dust, it is recommended that a fine paint brush is used to gently knock off dust particles. For heavier accumulations, canned air dusters (commonly used for cleaning electronics), or air from an airbrush, can be used.

Operator SD45 Parts List

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| SXT80121 | Screw, Flat Head, Self Tapping (For Plastic) 2.0MM X 6.0mm | SXT81498 | Truck Gear Set |
| SXT80168 | Type E coupler - Plastic 1 Pr. | SXT81500 | Power Axle Assembly 40" Wheels |
| SXT80169 | Type E coupler - Plastic 6 Pr. | SXT81502 | Gearbox Assembly |
| SXT80205 | Coupler Centering Spring | SXT81505 | Flexicoil Sideframe Set - Low Brake Cylinders |
| SXT80573 | Screw, Round Head, Self Tapping (For Plastic) 1.2MM X 3.0MM | SXT81514 | Operator Horn |
| SXT80580 | Screw, Round Head, Machine, 2.0MM X 4.0MM | SXT81515 | Operator Window and Lens Set |
| SXT80581 | Operator Mother Board | SXT81516 | Upper Weight |
| SXT80594 | Screw, Flat Head, Self Tapping (For Plastic) 1.6MM X 4.0MM | SXT81517 | Operator Bell |
| SXT80596 | Worm Gear Bearing | SXT81520 | Operator Battery Box and Cab Interior Set |
| SXT80597 | Worm Gear Thrust Washer | SXT81523 | Operator Walkway Set |
| SXT80599 | Blind Plug | SXT81525 | Operator Fuel Tank |
| SXT80814 | Oval speaker for OP HO Diesels 16 x 35MM 8 Ohm 1 Watt | SXT81526 | Flexicoil Power Truck Less Sideframes |
| SXT80927 | Screw, Round Head, Self Tapping (For Plastic), 2.0MM X 4.0MM | SXT81527 | Operator Drop Step Assembly |
| SXT81452 | Front Numberboard and Hight Light PCB | | |
| SXT81460 | Rear Headlight Only PCB | | |
| SXT81466 | Rear Numberboard and Headlight Light Shield | | |
| SXT81467 | Body Mounted Rear Light Shield | | |
| SXT81472 | Front Numberboard and High Headlight Light Shield Assembly | | |
| SXT81475 | Upper Weight Wire Keeper | | |
| SXT81477 | Gearbox Worm Gear Top Cover | | |
| SXT81478 | Chassis | | |
| SXT81479 | Motor Assembly | | |
| SXT81480 | Driveline Set | | |
| SXT81482 | Coupler Box | | |
| SXT81488 | Handrail Set | | |

Customer Service Crew Contact Information

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| ScaleTrains.com, Inc. Attention: Service 7598 Highway 411 Benton, TN 37307 | Support@ScaleTrains.com | Toll-Free: 844-9TRAINS 844-987-2467 Toll-Free Fax: 844-388-0779 |
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SD45 Locomotive

Operation. Accuracy. Durability. Quality. Value. Versatility.

These are the pillars of our Operator™ line. Each model is created utilizing builder's drawings, photographs, and more. Even though Operator models have fewer factory applied detail parts and simplified printing, they're designed to look right at home on your layout. And Operator models can be enhanced with modeler-applied parts and decals available separately. If you enjoy running high-quality realistic trains at an affordable price, our Operator series is for you.

PROTOTYPE SPECIFIC SCALETRAINS

- All-new model
- Fully assembled
- Three (3) different road numbers
- Directional LED headlights
- LED lighted number boards
- Dimensionally accurate truck centers
- Operation front and rear drop steps
- 81" Low short hood
- Early extended-range dynamic brake
- Chickenwire Radiator Grille Diamond Mesh
- Sectioned treadplate detail on the walkways
- 4,000 Gallon fuel tank
- Long hood mounted brakewheel housing and brakewheel
- Sill mounted EFCO
- Available with "Essential Sound Unit" DCC and sound from ESU pre-installed
- Operates in both DC and DCC
- Pre-drilled for grab irons, coupler cut levers, MU cables, etc. - Available in a separate upgrade kit (SXT81180)
- Minimum radius: 18"
- Recommended radius: 22"

OPERATOR LOCOMOTIVES FEATURES

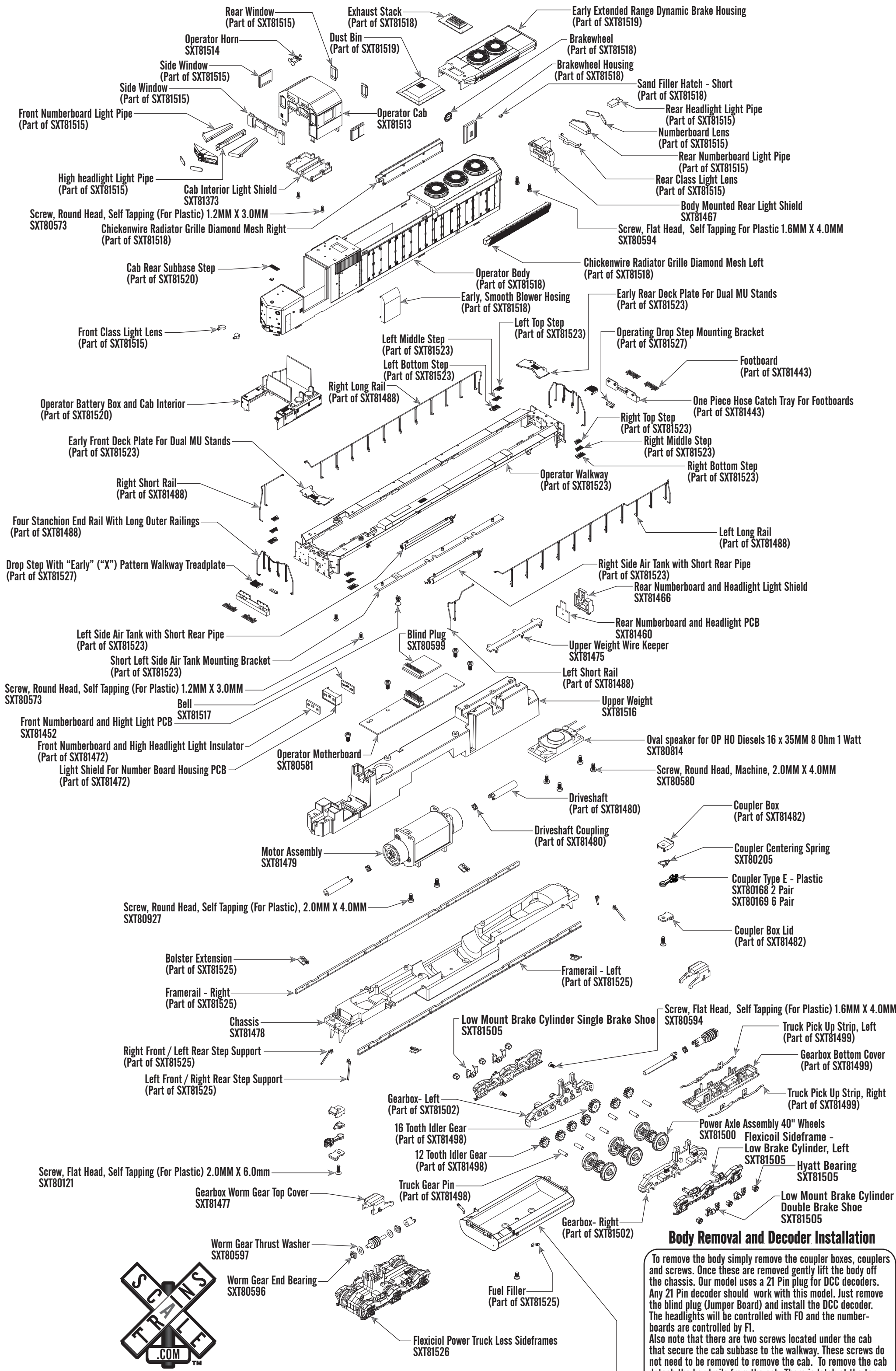
- Factory assembled
- Color matched to Tru-Color paint colors (Where Possible)
- Printing and lettering legible under magnification
- Semi-scale ScaleTrains.com Type E knuckle couplers
- Accurately profiled .110" wide wheel tread
- Weighted to Industry standards
- Operates on Code 70, 83 and 100 rail
- Packaging safely stores model

Warranty Policy

ScaleTrains.com, Inc. (ScaleTrains.com) warrants product purchased from authorized resellers to be free from defects in material and workmanship for a period of one (1) year from the date of purchase. The warranty period can be increased to two (2) years by registering online at <http://www.ScaleTrains.com/pages/warranty>.

If the product fails during the limited warranty period, carefully pack the model in the original packaging and include the sales receipt and explanation of the issue. Ship the model to our Customer Service address noted below. We recommend using a traceable service and adding insurance. Costs associated with shipping are not covered under warranty. If ScaleTrains.com deems the product to be defective, we will either (1) repair or (2) replace at our discretion.

Defects due to misuse, improper maintenance, and/or modification are not covered under warranty. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state. These terms are covered by the State of Tennessee.



Body Removal and Decoder Installation

To remove the body simply remove the coupler boxes, couplers and screws. Once these are removed gently lift the body off the chassis. Our model uses a 21 Pin plug for DCC decoders. Any 21 Pin decoder should work with this model. Just remove the blind plug (Jumper Board) and install the DCC decoder. The headlights will be controlled with FO and the numberboards are controlled by F1. Also note that there are two screws located under the cab that secure the cab subbase to the walkway. These screws do not need to be removed to remove the cab. To remove the cab detach the handrails from the cab. There is latch at the top rear of the cab so a small amount of force may be needed to pop the cab loose. To install the cab just reverse the process.

