///PRECOR ®

Service Manual

Experience™ Series 800 line
EFX®
EFX800-16 Base

Fixed and Moving Arms

PRECOR®

Contents

1   Introduction

If you are not a Precor certified servicer, you must not attempt to service any Precor Product. Call your dealer for service.

⚠️ **WARNING**: This service documentation is for use by Precor certified servicer providers only. Personal injury can result from electrical shock and/or mechanical moving parts.

This service manual applies to the Experience™ Series 800 Line EFX® models with the EFX800-16 Base.

EFX800-16 Base

Model	EFX800-16 Base Configuration
EFX833	Fixed Arms, Moving CrossRamp, and P30 console
EFX883	Fixed Arms, Moving CrossRamp, with P82 console
EFX835	Moving Arms, Moving CrossRamp, and P30 console
EFX885	Moving Arms, Moving CrossRamp, and P82 console

This document provides information to service the equipment base independent of the installed console. For console service documentation, refer to the particular console service manual.

This document contains information required to perform Troubleshooting and replacement procedures required to repair and maintain this equipment including: general product information, software diagnostic procedures, preventative maintenance procedures, inspection and adjustment procedures, Troubleshooting procedures, replacement procedures and system block and wiring diagrams.

Additional Documentation

There is also an online web version if you have internet access at: Online Service Manuall

See Also

"General Information" on the facing page

"Safety Guidelines" on page 9

"Operation Verification" on page 11

Standard Service Software

"Preventive Maintenance" on page 142

"Adjustment Procedures" on page 31

"Replacement Procedures" on page 43

Troubleshooting

General Information

The following information provides general equipment and service information that will help you to use this manual to properly repair and maintain the elliptical .

Orientation

The equipment orientation (front, right, left, back) used in manual is referenced to a user standing on the equipment facing the console.

EFX800-16 Base

Covers and Panels

Covers and Panels

Equipment cover and access panel locations.

Right side lift

Top lift cover

Goose neck gasket

Goose neck cover

Left side lift cover

Front lift cover

Rear lift cover

Accessory tray

Drive disk cover - right

Drive top cover

Drive housing cover - right

Lift interface plate cover

Ramp cover

Ramp/drive transistion cover

Drive access cover

Drive housing cover - left

Drive disk cover - left
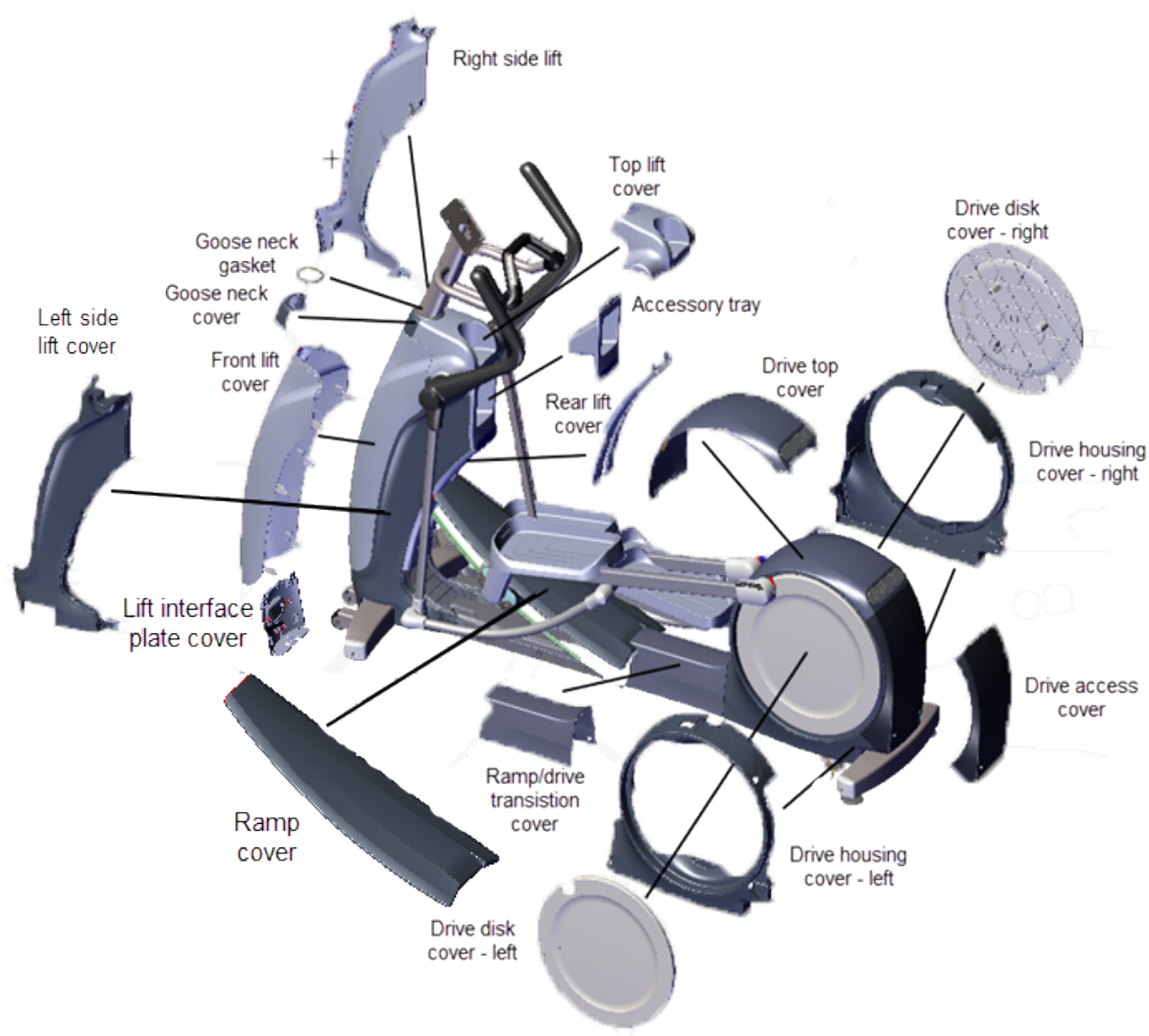
For cover removal and installation, see "Covers and Panels Replacement" on page 47.

System Component Overview

Basic electrical system component locations.
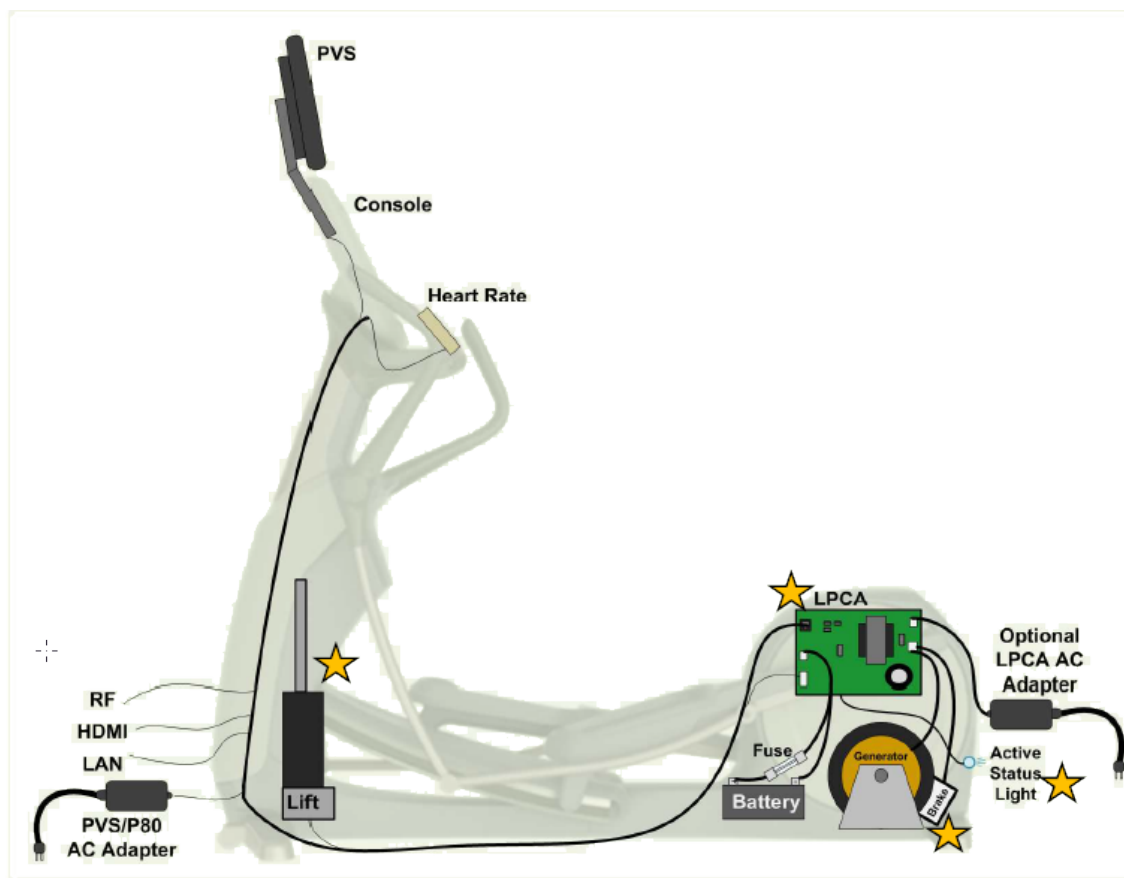
Tools

General set of service and repair tools.

- US and Metric Hex Key set
- US SAE and Metric Wrench set
- Torque wrench
- US SAE and Metric socket set
- Standard and Phillips screw driver set
- DVM Multimeter
- External Retaining Ring Pliers
- Belt Tension Gauge (recommended Kent-Moore BT-33-73-F)

Specification Summary Table

This table provides a summary of system component torque and belt rating specifications.

System Component	Specification
RF coax connector	2.4 in-lbs (0.271 Nm)
Display fasteners	180 in-lbs (20 Nm
Set screws	300 in-lbs (34 Nm)

System Component	Specification
Plastite screw fasteners	20 in-lbs (2.3 Nm)
Flathead screws	25 in-lbs (2.8 Nm)
Drive Assembly fastener	180 in-lbs (20.3 Nm)
Step-up Pulley and Tension Assy fasteners	180 in-lbs +/- 54 (20.3 +/_ 4.5 Nm)
Generator and Eddy Brake Assy fasteners	180 in-lbs +/- 54 (20.3 +/_ 4.5 Nm)
Linkarm fasteners	300 +/- 90 in-lbs (34 +/- 10 Nm)
Crankarm Retention Plate Fastener	30 +/- 9 in-lbs (3.4 +/- 1 Nm)
Yoke Ramp bolts	320 in-lbs (236.2 Nm)
First Stage Drive Belt Tension - New Belt	140-150 lbs (63.5 - 68 kgs)
First Stage Drive Belt Tension - Used Belt	125 - 135 lbs (56.7 - 61 Kgs)
Second Stage Drive Belt Tension - New Belt	110-120 lbs (50- 54.4 kgs)
Second Stage Drive Belt Tension - Used Belt	92 - 105 lbs (43 - 47.6 kgs)

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Parts

> **IMPORTANT**: Always purchase OEM replacement parts and hardware from Precor. If you use parts not approved by Precor, you could void the Precor Limited Warranty. Use of parts not approved by Precor may cause injury.

Exploded View Diagram and Parts List

There is a copy of the parts *Exploded View Diagram* and *Parts Identification List* included in the "Exploded View Diagram & Parts List" on page 150 chapter that you can use as a quick reference. It is recommended that you go to the servicer partners Precor Connect (or Precor Connection) website to view the most current parts information including the *Exploded View Diagram* and *Parts Identification List*.

- Precor Connect Partner website

Exploded View Diagram and Parts LIst, see "Exploded View Diagram & Parts List" on page 150.

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Lubricants

Use only synthetic lubricants such as Mobil 1® synthetic or SuperLube® with Teflon® grease. Use of unapproved lubricants, cleaners, or solvents may void the EFX warranty.

> **CAUTION**: Do not apply any lubricants or wax to the deck and belt. Do not use Wax Blast, silicon sprays, or other applied lubricants. The use of these lubricants will quickly degrade the low-friction surface of the deck.

> **CAUTION**: Do not use petroleum based lubricants on mechanical components such as the lift, as this may result in degradation of nylon gearing mechanisms. Use only synthetic lubricants such as "Super Lube with Teflon" or "Mobile One Synthetic" grease (RED).

Cleaning Solutions

Wipe down equipment with recommended cleaning solution. Use dry cloth to remove residue solution.

- **General**:
    - 1 oz mild soap (Simple Green) to 30 oz. water.
    - Athletix equipment cleaner, 9x7 pre-saturated wipes (ATHLETIX PRODUCTS).
    - Enivir Safe oxygen enhanced cleaner or Envir Safe glass and multi-task cleaner concentrate.
- **Console and PVS**: a diluted solution of one part 91% Isopropyl alcohol to one part water.

⚠️ **CAUTION**: Do not use acidic cleaners and do not spray directly onto the equipment surfaces.

Electrical Requirements

The EFX is a self-powered unit that does not require external power to operate. Pedaling will turn an internal generator which generates the power required to supply the internal electronics, lift motor, P10/P30 consoles, and battery charging functions.

Safety Guidelines

⚠️ **WARNING**: Only Precor certified servicers and technicians are permitted to service Precor products. Personal injury can result from electrical shock and/or mechanical moving parts.

Safety guideline you need to know and follow:

- Read and follow all **Warning** notices to protect yourself from personal injury.
- Read and follow all **Caution** notices to prevent damage to the equipment.
- Read the owner's manual and follow all operating instructions.
- Operate the equipment on a solid, level surface.
- Visually check the equipment before beginning service or maintenance operations. If it is not completely assembled or is damaged in anyway, do not attempt to operate the equipment.
- Never place liquids on any part of the equipment while performing service.
- To prevent electrical shock, keep all electrical components away from water and other liquids.
- Do not use accessory attachments that are not recommended by the manufacturer. non-DEM accessories can cause injuries.
- Do not stand or climb on the handlebars, display enclosure or cover.
- On a self-powered unit, it will either be necessary to either equip the unit with the optional external power supply or have an assistant pedal on the unit while voltage measurements are being taken. Because of the danger of working on the unit while it is in motion using the optional external power supply is strongly recommended.
- On ATM units when the stairarms are in motion; the generator will operate and produce potentially hazardous voltages even when the battery is disconnected.
- On AMT units with Cardio Theater PVS units will have external power supply and coaxial cable routed through the bottom of the unit to the top of the display console. Cord management must be maintained
- On ATM units, a pinching hazard exists when the unit is operated. It is possible to seriously pinch a finger. The AMT can be mechanically locked by inserting a screwdriver through the primary sheave and frame.
- On treadmills, removing the hood exposes high voltage components and potentially dangerous machinery. Exercise extreme caution when you perform maintenance procedures with the hood removed.

When servicing the equipment:

- During service operations you will be very close to moving machinery and voltage bearing components:
  - Remove jewelry (especially from ears and neck),
  - Tie up long hair,

- ○ Remove neck ties, and

- ○ Do not wear loose clothing

See Also

"Safety Instruction" on page ii

"Safety Notices" on page ii

2   Operation Verification

This section provides a method of verifying that the machine is operating correctly and can be returned to service. Do this operation verification at the end of a maintenance procedure or whenever it is necessary to ensure that the machine is operating properly.

Operation Verification Tests

Perform this procedure and tests to verify proper operation of the unit (use the "Operation Verification Checklist" on the next page to track results):

1. **Error Code Verification**
   Verify that there are no current error codes or issues with the unit.

   a. Go to the Error Log (or Event Log) to review any logged error codes. Resolve any relevant active error codes, see"Error Log & Event Log" on page 131.

   b. P10, P30 consoles: Clear the error log; select a logged error and then hold down the **QUICK START** key until the "NO ERRORS" message shows. Repeat process until all error codes are deleted.

   TIP: Error Log Delete Short Cut:
   Press and hold the **PAUSE/RESET** key for a minimum of 6 seconds to open the Error Log and view all logged error codes. If there are no logged error codes, the "Stuck Key" message will show. To remove error codes, select the error code and press/hold the **QUICK START** key until the "NO ERRORS" message shows.

   Note: P62, P80, P82 consoles: Error codes are stored in the **Event Log** (Access **Hardware Validation (5,1,7,6,5,7,6,1)** > select **Settings** > **About** > **Event Log**). Unlike earlier model consoles, the error codes cannot be manually removed.

1. **Hardware Validation Tests**:
   Access the diagnostics **Hardware Validation Tests** (access code 5,1,7,6,5,7,6,1) and run the following tests:

   a. **DISPLAY TEST** (select **DISPLAY TEST):** Follow prompts to run test.

   b. **KEYPAD TEST** (select **KEYPAD TEST**): Follow prompts to run test.

   c. **HEART RATE TEST** (select **HEART RATE TEST**): Follow to and run test.

   d. **CROSSRAMP TEST** (select **MACHINE TEST > CROSSRAMP TEST**):

      i. Use the incline control to verify the incline level 1 and level 20 A/D values, level 1 = [[[Undefined variable EFX800-16Base.spec-LifMotorAD1]]] and level 20 = [[[Undefined variable EFX800-16Base.spec-LiftMotorAD20]]].

      ii. Use the incline control to set the incline level to 20 and verify the A/D value is [[[Undefined variable EFX800-16Base.spec-LiftMotorAD20]]].

   - **Exit**: Press the **RESET** key to exit diagnostics. On P82 consoles, press **Back** to exit diagnostic and return to the Home page.

2. **Operational Check**:
   Select the **Manual** program and operate the elliptical for at least 5 minutes. While

operating the unit, you will verify basic resistance and incline control functionality and that the various console metric indicators and user interface displays are showing the correct values and user information:

    a. Operate the **RESISTANCE** control from level 1 through 20. Concentrate on the feel of the pedaling motion verifying increased resistance. Be on the alert for any unusual noises, odors, or vibrations.

    b. Press and hold the **INCLINE UP** control to raise the crossramp from level 1 until the maximum incline level is reached while viewing the incline indicator. Confirm that the indicators maximum crossramp level reads 20 and that there are no unusual noises or vibration.

    c. Press and hold the **INCLINE DOWN** control to lower the crossramp from level 20 until the lowest level is reached while viewing the incline indicator. Confirm that the ramp returns to level 1 (lowest level) and that there are no unusual noises or vibrations.

3. **Final Error Code Check**:
Verify that there were no new relevant logged error codes caused the operation verification tests.

    a. Go to the Error Log (or Event Log) and make sure that there are no new relevant logged error codes. If there are any new relevant error codes, resolve the error code and repeat the operation verification procedure.

    b. On P10, P30 consoles, clear the Error Log of all logged error codes.

4. **Return to service**:
On successful completion of these tests, return unit to service.

Operation Verification Checklist

Use this checklist to track that each was successfully completed. When each test was successfully completed, return the unit to service.

- ☐ Error Log Verification Check, record, and then clear any errors in the error log.
- ☐ Display Test: Verify the console metric display LEDs function properly.
- ☐ Keypad Test: Verify console hardkeys and keypad keys function properly.
- ☐ Heart Rate Test: Verify the heart rate functions properly.
- ☐ CrossRamp Test; Verify the cross ramp operates through the full incline range.
- ☐ Operational Check: Verify the unit performance while operating the unit in Manual program mode.
- ☐ Error Log Check: Final check for any new error codes that may have been logged during the verification tests.

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3   Standard Service and Diagnostics Menus

About

There are three Standardized Service and Diagnostics menus used across Precor cardio product lines providing equipment usage information, club settings, and machine service diagnostic tests:

- **Hardware Validation** (5,1,7,6,5,7,6,1) is a set of automated diagnostic tests and hardware calibration routines used to troubleshoot and verify machine operation.
- **Club Settings** (5,6,5,1,5,6,5) also referred to as Club Parameters used to manage and customize user machine workout limit parameters. On touchscreen consoles, machine usage information and error event code data is included.
- **Information Display** (6,5) provides software information, machine usage information, and error event codes. Only supported on P10, P20, and P30 consoles.

The service and diagnostics menus are accessed by entering the standardized service access code. The user interface and service menu capabilities will vary based on the console model and type of exercise equipment. consoles that currently support standardized service modes include:

Non-touchscreen consoles: P10, P20, and P30
Touchscreen consoles: P62, P80, and P82

Service Access Codes

The following table lists the available standardized service menus and access codes:.

SERVICE ACCESS CODE	SERVICE MENU	FUNCTION
5,1,7,6,5,7,6,1	Hardware Validation	Diagnostic tests.
5,6,5,1,5,6,5	Club Settings	Configure machine and workout parameter limits[1].
6,5 ‡	Information Display	View usage stats, HW/SW connectivity, and error code information[2].
1) On P62, P80, and P82 consoles, the Information Display (6,5) data is also included in Club Settings (5,6,5,1,5,6,5). 2) The Information Display (65) is not supported on the P62, P80, and P82 consoles, access Club Setting (5,1,7,6,5,7,6,1) to access similar data.		

How to Access the Service and Diagnostics Menus

The process to access the service menus vary between console models. Go to section listed below for your particular console to learn how to access the service menus.

P10, P20, and P30 consoles

Steps:

1. Press either the **STOP**, **PAUSE**, or **RESET** hardkey an immediately type in the access code.

P80 consoles

P80 Console

Menu access:

Press & Hold + VOL CH
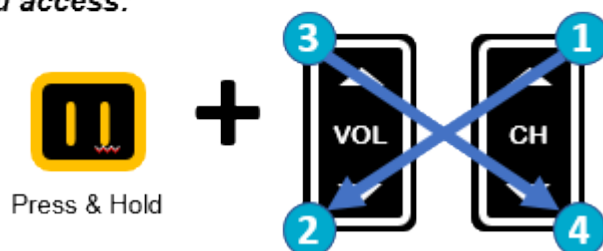
Steps

1. Make sure the P820 is set to the Welcome home page.
2. Press and hold the **Pause** key while pressing **CH up >VOL down > VOL up > CH down**:
3. Use the touch keypad to type in the service access code.

P62 and P82 consoles

P82 Console

Menu access:

Press & Hold → VOL + CH

(up > down > down > up)

Steps

1. Make sure the P82 is set to the Welcome home page.
2. Press and hold the **VOL down** key while pressing **CH up >CH down > CH down > CH up**:
3. Use the touch keypad to type in the service access code.

Navigating the Service Menus

The hardkeys and softkeys used to navigate the service menus vary between console models. Go to section listed below for your particular console to learn how to navigate the service menus.

P10 & P30 consoles

The service menus are organized in a sequential top-menu to sub-menu to control item flow architecture.

Menus and submenus are accessed using a combination of **Up/Down** arrow, **OK**, **BACK**, and **ENTER** keys. By design, the arrow keys should be used to scroll from one menu item to the next, while the **OK**, **ENTER**, and **BACK** keys are used to enter and exit submenus. In some cases the operation is inconsistent, and the **OK/ENTER** key will instead advance to the next menu rather than enter a submenu.

CONSOLE KEY	FUNCTION/DESCRIPTION
Up/Down	Moves up and down through the current menu.
OK	Selects the current menu item or confirms settings.
BACK/CLEAR	• Returns to the previous menu level without saving changes. • Hold **Back** to exit the **Display** test.
PAUSE	• Exits service mode • Press and hold PAUSE for greater than 6 sec will open the Error Log or show the "Stuck Key" message when there are no logged errors.

P80 and P82 consoles

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The P80 and P82 consoles use the touchscreen softkeys to select items and navigate the service diagnostic test menus.

Follow the on-screen prompts run the diagnostic tests.

CONSOLE KEY	FUNCTION/DESCRIPTION
Softkey controls	Use your finger to touch the on-screen softkey controls (OK. START, STOP, BACK, etc.) or menu item to select.
Scroll Up/Dwn	Use your finger to select while swiping your finger Up/Dwn to scroll through menu items. Some menus provide a scroll bar on the screen right side to scroll Up/Dwn.
BACK softkey	• Use the touchscreen BACK softkey to return to the previous menu display. • Continue selecting the BACK softkey to exit the service software.
PAUSE hardkey	Stop a running diagnostic test.

P62 consoles

The P62 console uses a combination of touchscreen softkeys and keypad hardkeys to select and navigate thru the service and diagnostics menus. The P62 uses the BACK hardkey to return to the previous menu and the PAUSE hardkey to stop a running diagnostic test.

Follow the on-screen prompts run the diagnostic tests.

CONSOLE KEY	FUNCTION/DESCRIPTION
Softkey controls	Use your finger to touch the on-screen softkey controls (OK. START, STOP, etc.) or menu item to select.
Scroll Up/Dwn	Use your finger to select while swiping your finger Up/Dwn to scroll through menu lists. Some menus provide an on-screen scroll bar to scroll Up/Dwn.
BACK hardkey	• On P62 consoles, use the control keypad BACK hardkey to go back or return to the previous menu display. • Continue selecting the BACK hardkey to exit the service software.

CONSOLE KEY	FUNCTION/DESCRIPTION
	  BACK button P62 Console
PAUSE hardkey	Stop a running diagnostic test.

Hardware Validation Service Menu (51765761)

Access Code: 5,1,7,6,5,7,6,1 (see "Service Access Codes" on page 13)

The Hardware Validation menu provides a set of automated diagnostic tests and hardware calibration routines used to troubleshoot, calibrate, and verify machine operation. The diagnostic tests are customized for the particular equipment type and console configuration.

P10, P20, and P30 consoles

Menu path: Hardware Validation Tests (5,1,7,6,5,7,6,1) > Hardware Validation Tests.

DIAGNOSTIC TEST	TEST DESCRIPTION
DISPLAY TEST	Tests the console LEDs. Successively press the **OK** key to verify each group of LEDs and verify that all LEDs illuminate. Press **Back** to exit the test.
KEYBOARD TEST	An illuminated LED map of the function keys will be shown. Press each individual key and verify that the corresponding LED extinguishes. Press and hold **BACK** to exit the test.
PVS KEY TEST	Not used, OEM test.
HEART RATE	Tests the unfiltered, filtered, and pulse heart rate. Grasp the grips to test the hand held heart rate. Use a Polar heart rate simulator to test the wireless heart rate. Press the **BACK** button to exit this test.

DIAGNOSTIC TEST	TEST DESCRIPTION
ACTIVE STATUS LIGHT	The current **ASL**[1] status light state (blue. pulsing blue, yellow, & pulsing yellow).
AS LIGHT BRIGHTNESS	Sets the ASL light brightness level and ON/OFF state: HIGH. MED, LOW, and ON/OFF.
RPM TEST	(EFX only) Menu path: **MACHINE TEST** > **RPM TEST** The current RPM (revolutions per Minute) value. The SPM (strides per minute) is equal to 2 X RPM.
CROSSRAMP TEST	Menu path: **MACHINE TEST** > **CROSSRAMP TEST** (EFX, AMT Only) Allows lift command operation during an active lift error condition (E40, E42, E45, E46) even if the lift is out of range, jammed, or otherwise disabled due to an error condition. **CAUTION**: DO NOT jam the crossramp while operating in error mode - There are no software position limit stops in this mode.
BATTERY TEST	Menu path: **MACHINE TEST** > **BATTERY TEST** (EFX 800 only) Shows the current battery voltage level as " XX.X VDC Y."., Where: XX>X, measured DC battery voltage, nominal 12.6 - 14.6 Vdc. Y suffix definition: "C": external AC charger is connected, "L" battery is low (less than 11.5 Vdc), "CL" charger is connected and the battery is low.

P62, P80, and P82 consoles

Menu path: Hardware Validation Tests (5,1,7,6,5,7,6,1) > System Settings > System Tests.

On P62, P80, and P82 consoles, the diagnostic tests are located in the Hardware Validation System Tests menu.

SYSTEM TESTS	TEST DESCRIPTION
Brake Test	If brake is operational, provides the following information: • PWRB XXX Displays the current power bits. • VBUS XX Bus Voltage used to drive the brake. • M-AMPS XX DC current going through brake.
Battery Test	(EFX 800 only) Shows the current battery voltage level as " XX.X VDC Y."., Where: XX>X, measured DC battery voltage, nominal 12.6 - 14.6 Vdc.

[1]Active Status Light: Service and maintenance status light.

SYSTEM TESTS	TEST DESCRIPTION
	Y suffix definition: "C": external AC charger is connected, "L" battery is low (less than 11.5 Vdc), "CL" charger is connected and the battery is low.
SPM Test	(EFX only)
	Current SPM "Strides per Minute" value.
CrossRamp Test	(EFX, AMT only)
	Manually run the lift motor to raise/lower the crossramp through full range, levels 1 to 20.
	Provides the lift potentiometer A/D digital value.
USB[1] Test	List the active USB ports.
Touchscreen Test	Verify touchscreen operation.
Touchscreen Calibration	Calibrates touchscreen finger press operation.
Backlight Test	Tests the display backlight performance.
RGB Test	Tests the display color performance.
Numeric Backlight Test	Tests the LED numeric display backlight brightness level.
Numeric Display Test	Tests the LED numeric display.
Heart Rate	Tests the handlebar unfiltered, filtered, and pulse heart rate. Grasp the grips to test the hand held heart rate. Use a Polar heart rate simulator to test the wireless heart rate. Press the back button to exit this test.

Club Settings Service Menu (5651565)

Club Settings access code: 5,6,5,1,5,6,5 (see "Service Access Codes" on page 13)

On non-touchscreen consoles (P10, P20, and P30), Club Settings is used to manage and customize workout limit parameters. On touchscreen consoles (P62, P80, and P82), Club Settings menu provides access to four main submenus: the About menu, the Equipment Usage menu, the System Settings menu, and the Maintenance menu.

P10 & P30 consoles

The Club Settings menu is used to configure and customize workout parameters.

Menu path: **Club Settings (5,1,7,6,5,7,6,1) > DIAGS - CLUB SETTINGS**

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[1]Short for Universal Serial Bus, is an industry standard developed in the mid-1990s that defines the cables, connectors and communications profocols used in a bus for connection, communication, and power supply between computers and electronic devices.

CLUB PARAMETER	DESCRIPTION
SAFETY CODE	Enabled or disabled. When enabled, a user password (xxxx) is required o use the machine. Factory default: disabled.
SELECT LANGUAGE	Sets the default language for all workouts on this machine. Language for single use workouts can also be set by the user from the workout options. Default: English
SET UNITS	Sets units of measure to US standard or Metric. Range: U.S, Metric Default: U.S.
SET MAX WORKOUT TIME	Sets the maximum allowable user workout time per session. Range: 1 to 240 min, NO LIMIT Default: 60 min
SET MAX PAUSE TIME	Sets how long the equipment remains in a paused banner during a workout before resetting. Range: 1 to 120 sec Default: 120 sec
SET COOL DOWN TIME	Sets the amount of time that a cool down period will occur at the end of every workout. Factory default is 5 minutes. Settable in 1 minute increments. Range: 1 to 5 min Default: 5 min
SET METRICS DEFAULT	Sets a metric that may be of specific importance to the specific facility or fitness trainer. The selected metric will scroll across the screen at regular intervals during the workout. Default: none
SET CROSSRAMP	Sets the crossramp default X"Home" incline auto-level. The crossramp will drive to the default incline level after 60 sec of non-use. Range: 0 - 20 Default: 1 ⚠ **WARNING**: The crossramp will automatically drive to the Default incline level after 90 sec of non-use.
HIDDEN PROGRAMS	Either enabled or disabled*, the setting allows the unit to access specialized fitness tests designed for police, fire fighters and the military. Default: disabled
MAINT CONFIG	(ASL only) Sets the ASL maintenance counter reminder function ON/OFF (ASL pulsing blue light ON/OFF).
SET CUSTOM PROGRAM 1/2	Sets the use of a customized workout program. Range: ON/OFF

CLUB PARAMETER	DESCRIPTION
	Default: OFF
	Note: The Total Body Workout can only be turned on in this Club Settings menu.
Note: * not available on all models.	

P62, P80, and P82 Console

P62, P80, and P82 consoles

On P62, P80, and P82 consoles, the **Club Settings** service menu includes four main submenus: the **About** submenu, the **Equipment Usage** submenu, the **System Settings** submenu and the **Maintenance** submenu:

- "About menu" below: General information about the machine (serial number, name, type, location, software versions, internet/Wi-Fi connectivity) and the event and error codes (Error Log or **CPA**[1] Event Log).
- "Equipment Usage menu" on the facing page: Machine workout usage information (total workout time & distance, last work start/stop times).
- "System Settings menu" on page 24: Provides the user defined club configuration and setup parameters for Connectivity (internet/Wi-Fi), Display settings, TV settings, Workout Limits settings, and Manage settings (save, import/export system settings).
- "Maintenance menu" on page 27: Provides machine ASL status and running belt required maintenance status and reminder information.

About menu

menu: **Club Settings (5,6,5,1,5,6,5) > About**

Information about the machine hardware, software, and error event codes.

ABOUT MENU	DESCRIPTION
CPA Event Log	menu: **About > CPA Event Log**
	The CPA Event Log contains all console and base error diagnostic messages and error codes including network connectivity information, OEM test codes, and maintenance error codes.
	.Note: Use the CPA Event Log and not the CPA Event Log to find the machine maintenance error event codes. The CPA Event Log only contains maintenance error codes.
CPA Event Log	menu: **About > CPA Event Log**
	The CPA Event Log only contains the machine maintenance error event codes, see "*Error Troubleshooting Guide*" for error code

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[1]Control Processing Assembly

ABOUT MENU	DESCRIPTION
	description and troubleshooting information.
	.Note: Use the CPA Event Log and not the CPA Event Log to find the machine maintenance error event codes.
Console Serial Number	menu: **About > Serial Number**
	User assigned machine name.
Lower Serial Number	menu: **About > Serial Number**
	User assigned machine name.
Friendly Name	menu: **About > Friendly Name**
	User assigned machine name.
Location	menu: **About > Location**
	Facility location code.
Console Serial Number	menu: **About > Console Serial Number**
	Console serial number.
Release Bundle Version	menu: **About > Release Bundle Version**
	Provides console and base software version numbers: CPA Software, **LPCA**[1], Qt App, Boot Kernel, File System.
ETag Check Interval	menu: **About > ETag Check Interval**
	OEM use only
Heartbeat Interval	menu: **About > Heartbeat Interval**
	OEM use only
Wired MAC Address	menu: **About > Wired MAC Address**
	Wired LAN MAC address
WI-FI MAC Address	menu: **About > Wi-Fi MAC Address**
	Wireless Wi-Fi MAC address
Network Time Server1	menu: **About > Network Time Server1**
	NTP[2] server address
Machine Type	menu: **About > Machine Type**
	Specifies the detected machine type: TRED, AMT, EFX.

Equipment Usage menu

menu: **Club Settings (5,6,5,1,5,6,5) > Equipment Usage**

Information about the usage of the machine.

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[1]Lower PCA board

[2]Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over packet-switched, variable-latency data networks.

EQUIPMENT USAGE MENU	DESCRIPTION
Cumulative Workout Distance	menu: **Equipment Usage > Cumulative Workout Distance** Machine total workout distance.
Cumulative Workout Sessions	menu: **Equipment Usage > Cumulative Workout Sessions** Machine total number of workout sessions.
Last Workout Start Timestamp	menu: **Equipment Usage > Last Workout Start Timestamp** The most recent workout start time.
Last Workout End Timestamp	menu: **Equipment Usage > Last Workout End Timestamp** The most recent workout end time.

System Settings menu

menu: **Club Settings (5,6,5,1,5,6,5) > System Settings**

System Settings submenus:

- "Connectivity menu" below: Network configuration and setup parameters.
- "Display menu" on the facing page: GUI interface and optional apps configuration and setup parameters.
- "TV Settings menu" on the facing page TV configuration and setup parameters.
- "Workout Limits menu" on page 26: Club workout limit configuration and setup parameters
- "Manage Settings" on page 27: Used to save and restore Connectivity. Display, Media, and Workout Limits settings.

SYSTEM SETTINGS MENU	DESCRIPTION
Connectivity menu	menu: **Club Settings (5,6,5,1,5,6,5) > System Settings > Connectivity** Internet connectivity settings.
» Network Type	menu: **System Settings > Connectivity> Network Type** Range: Wired, Wi-Fi Default: Wired
» Configuration	menu: **System Settings > Connectivity> Network Configuration** Range: Automatic (recommended), Manual Default: Automatic Specifies internet connection mode.
» Status	menu: **System Settings > Connectivity> Network Configuration**

SYSTEM SETTINGS MENU	DESCRIPTION
	Range: Connected, Not Connected
	Specifies internet connection status.
» IP Address	menu: **System Settings > Connectivity> Network Con-figuration**
	Specifies console internet IP address.
» Preva® Server	menu: **System Settings > Connectivity> Network Con-figuration**
	Specifies Precor Preva server URL (na.preva.com).
Display menu	menu: **Club Settings (5,6,5,1,5,6,5) > System Settings > Display**
	Console default display configuration settings: language, units, standby delay, .browser and news reader on/off.
» Default Language	menu: **System Settings > Display > Default Language**
	Default: English
	Specifies the default user interface language.
» Measurement Units	menu: **System Settings > Display > Measurement Units**
	Range: US Standard, Metric
	Default: US Standard
	Specifies the default measurement units.
» Standby Mode Delay	menu: **System Settings > Display > Standby Mode Delay**
	Range: 5, 10, 15. 30, 60 minutes
	Default: 15 minutes
	Specifies the idle wait time before entering standby mode.
» Browser	menu: **System Settings > Display > Browser**
	Range: ON/OFF
	Default: ON
	Show (enable) the Browser app.
» News Reader	menu: **System Settings > Display > News Reader**
	Range: ON/OFF
	Default: ON
	Show (enable) the News Reader app.
TV Settings menu	menu: **Club Settings (5,6,5,1,5,6,5) > System Settings > TV Settings**
	Configuration TV settings and channel guide.
» Channel Guide	menu: **System Settings > TV Settings > Channel Guide**
	TV channel configuration.
» TV Source	menu: **System Settings > TV Settings > Channel Guide**
	Default: Internal Tuner

SYSTEM SETTINGS MENU	DESCRIPTION
	TV input signal source
» TV Source	menu: **System Settings > TV Settings > TV Source** Default: Internal Tuner TV input signal source
» Region	menu: **System Settings > TV Settings > Region** Specifies the TV input signal modulation format for a particular geographical region.
» Default Channel	menu: **System Settings > TV Settings > Default Channel** Default: Not set TV default channel.
» Skip Unnamed Channel	menu: **System Settings > TV Settings > Skip Unnamed Channels** Default: ON Skips over unnamed channels.
» Extensive Scan	menu: **System Settings > TV Settings > Extensive Scan** Default: OFF Searches all available channel sources.
» Closed Captioning	menu: **System Settings > TV Settings > Closed Captioning** Default: On Switches close caption feature ON/OFF.
» Export/Import Channels	menu: **System Settings > TV Settings > Export/Import Channels** Export/Import channel mapping using a USB .flash drive.
Workout Limits menu	menu: **Club Settings (5,6,5,1,5,6,5) > System Settings > Workout Limits** Specify the workout duration and equipment limits for your facility.
» Maximum Workout Duration	menu: **System Settings > Workout Limits > Maximum Workout Duration** Range: 1 to 240 min, NO LIMIT Default: 60 min Sets the maximum allowable user workout time per session.
» Maximum Pause	menu: **System Settings > Workout Limits > Maximum Pause** Range: 1 to 300 sec Default: 30 sec Sets how long the equipment remains in a paused banner during a workout before resetting.

SYSTEM SETTINGS MENU	DESCRIPTION
» Summary Time Out	menu: **System Settings > Workout Limits > Summary Time Out**
	Sets the time to view the Workout Summary data.
	Range: 1 to 120 sec Default: 60 sec
» CrossRamp Auto-Level (TRM only)	menu: **System Settings > Workout Limits > Summary Time Out**
	Range: 1 - 20 Default: 1
	Sets the ramp default incline level:
» Register Equipment	menu: **System Settings > Workout Limits > Register Equipment**
	GUI interface to register equipment with Precor.Preva Business Suite "PBS" (requires PBS user name and password, location code, base serial number, & friendly name of the unit).
Manage Settings	menu: **System Settings > Manage Settings**
	Save and restore settings for Connectivity, Display, Media, and Workout Limits.
(1) Not available on all models.	

Maintenance menu

menu: **Club Settings (5,6,5,1,5,6,5) > Maintenance**

Information about the machine operating status and running belt condition and maintenance.

MAINTENACE MENU	DESCRIPTION
Recommended Action menu	menu: **Maintenance > Recommended Action**
	Range: Good, Inspect
	• Good: No maintenance required.
	• Inspect: Maintenance action required.
	Used to report the running belt/deck operating condition status and belt rating.
» Operating Condition	menu: **Maintenance > Recommended Action > Operating Condition**
	Range: Good, Inspect
	Good: No maintenance required.
	Inspect: There is an issue with the running belt/deck that requires maintenance service or replacement.
» Belt Rating	menu: **Maintenance > Recommended Action > Belt Rating**

MAINTENACE MENU	DESCRIPTION
	Range: 10 - 0 (10- New condition, 0 or 1 - Replace running belt)
	A belt rating of 0 or 1 will cause a blue pulsing ASL light indicating that there is a problem with the running belt/deck and is in need of servicing or replacement.
» Next Maintenance Due	menu: **Maintenance > Recommended Action > Next Maintenance Due**
	Provides machine maintenance status:.
Active Status Light (ASL) menu	menu: **Maintenance > Active Status Light**
	Indicates the machine operating and maintenance status, see "Active Status Light (ASL)" on page 133.
	Blue Solid: Normal operation Indicates that the ASL has not detected any logged error codes.
	Blue Pulsing: Preventative maintenance reminder.
	• Treadmills: A belt rating of 0 or 1 will cause a blue pulsing ASL light indicating that there is a problem with the running belt/deck and is in need of servicing or replacement.
	• ALL : The maintenance counter starts at 1000 hours counting down to active use hours to 0 indicating preventative maintenance is due.
	Yellow Solid: Indicates an error has occurred, was self-corrected and the machine can be used. The fault can be cleared.
	Yellow Pulsing There is a current non-recoverable fault condition, there is a loss of a major function and the machine id out-of-service. Machine service is required.
» AS light Brightness	menu: **Maintenance > Active Status Light > AS Light Brightness**
	Range: low, medium, bright
	Adjust the ASL brightness level.
» Maintenance Reminder	menu: **Maintenance > Active Status Light > Maintenance Reminder**
	Range: OFF/ ON (default)
	Switch the maintenance reminder function ON or OFF.

Information Display (65)

Service Access Code: 6,5 (see "Service Access Codes" on page 13)

The Information Display is only supported on P10, P20, and P30 consoles. On P62, P80, and P82 consoles, refer to Club Settings for similar information.

The Information Display menu provides information about the machine usage, software, maintenance, and the error event code log.

P10, P20, and P30 consoles

METRIC	DESCRIPTION
ODOMETER	The total number of accumulated miles on the unit.
	This value is stored in the upper PCA in the console so if the PCA is replaced the accumulated miles would start again from "0".
HOUR METER	The total number of hours that the unit took to accumulate unit miles.
	This value is stored in the upper PCA in the console so if that PCA is replaced the hours of use would start again from "0".
BELT RATING[2]	Displays the belt rating from 10 (best) to 0 (worst). Resettable to 10 by holding down **QuickStart**.
MAINT COUNTER	Hours remaining until maintenance is required (initializes to 250 hrs, approximately 1 month use). Press/Hold the **PAUSE/RESET** key to reset the counter.
U-BOOT SW	The console Upper Boot software version information.
U-BASE SW	The console Upper Base software version information.
METRICS BOARD SW	The console Metrics board software version information
L-MAJOR SW	The LPCA Major processor software version information.
L-MINOR SW	The LPCA Minor processor software version information. Note: The Minor software versions can only be viewed while the user is pedaling. If the user is NOT pedaling, then the software will be displayed as "--------------".
L-ASL SW	The LPCA Active Status Light processor software version information.
SER NUMBER	Displays the model and serial number of the machine. The base serial number can be set using the WinCSAFE computer software. The factory default is NONE.
USAGE LOG	Displays the type of workout programs the users are accessing most frequently.
"Error Log & Event Log" on page 131	Table of stored error event codes.
	TIP: You can quickly access the Error log by holding down the **PAUSE** key. Will show the **STUCK KEY** message when there are no logged error codes.

(1) Only available on ASL equipped models.

(2) TRM800-14, TRM700-16 models

P62, P80, and P82 consoles

The P62, P80, and P82 consoles do not support the **Information Display** service menu (6,5).

On P62, P80, and P82 consoles, the **Information Display** (6,5) type data is located in **Club Settings** (5,6,5,1,5,6,5) service menu, see the P62, P80, and P82 console "Club Settings Service Menu (5651565)" on page 20.

4   Adjustment Procedures

Adjustment procedures provide you with the step-by-step adjustment instructions to bring systems and components into specification. Perform the adjustment procedures whenever a trouble symptom points to a particular component and after a major component is removed/replaced.

Available Adjustment Procedures
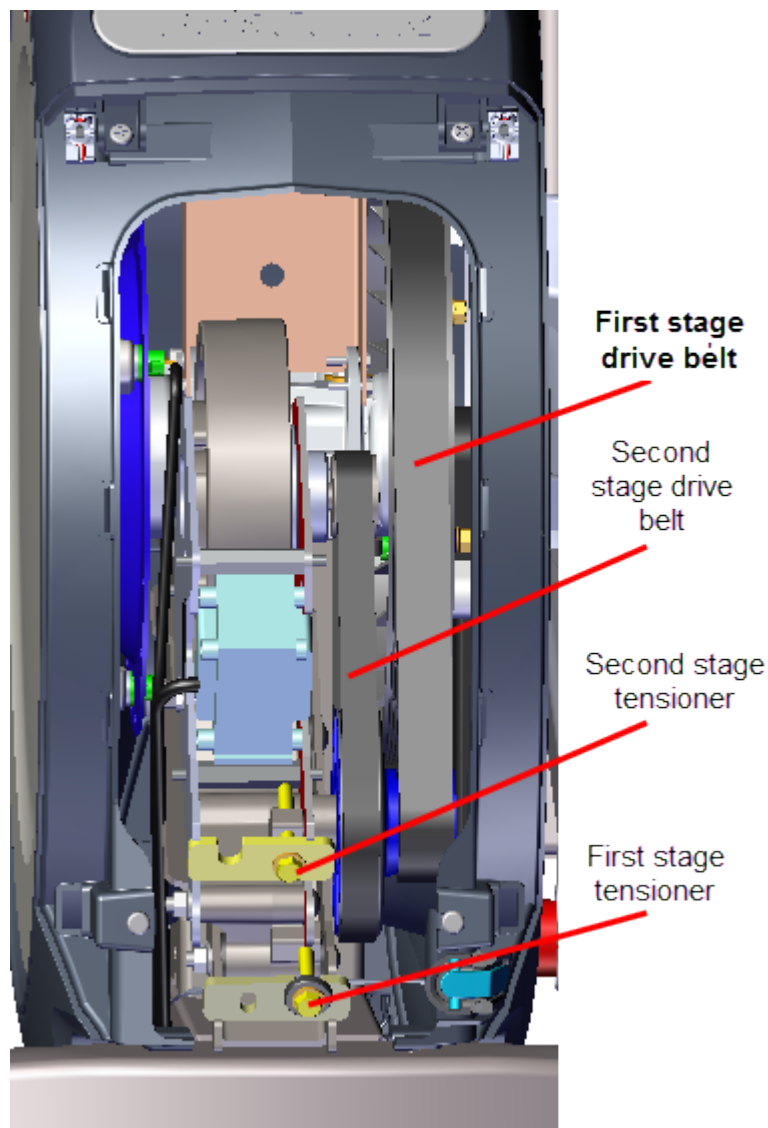
First Stage Drive Belt Tension Adjustment

About

This procedure provides instruction to adjust the First Stage Drive Belt tension.

Specifications

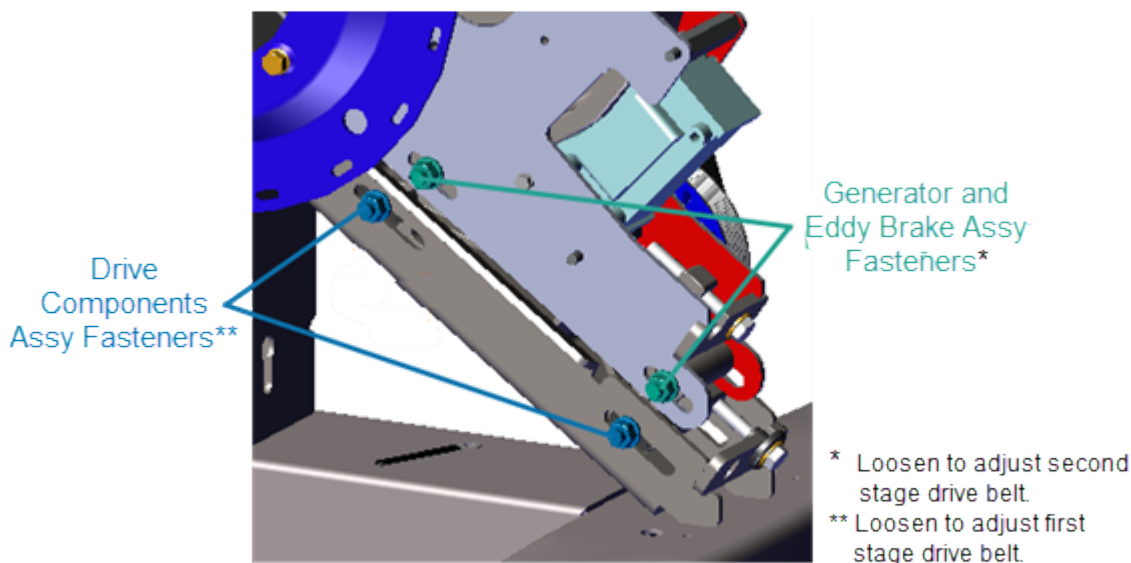| System Component	Specification
First Stage Belt Drive Tension - New	140-150 lbs (63.5 - 68 kgs)
First Stage Belt Drive Tension - Used	125 - 135 lbs (56.7 - 61 Kgs)
Drive Component Assy Carriage Bolts	110-120 lbs (50- 54.4 kgs)

Procedure

Review entire procedure before starting.

1. Remove the Drive Access Cover, see "Drive Access Cover Replacement" on page 56.

2. Remove the left drive disk cover, see "Drive Disk Covers Replacement" on page 57.

3. Place the belt tension gauge onto the First Stage Drive Belt midway between the two pulleys and measure the tension. If the tension is within specification, belt tension adjustment is not required. If the tension is not within [[[Undefined variable EFX800-16Base.spec-BeltTensionFirstStage-12]]] continue with the belt tension adjustment.
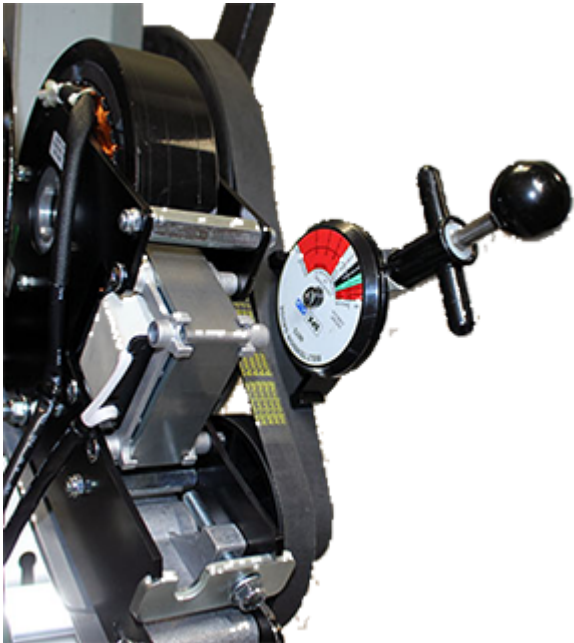

4. Use a 1/2" socket to loosen the two Drive Components Assembly fastener nuts (left

side) enough to allow assembly movement. Do not remove the fastener nuts.

Drive Components Assy Fasteners**

Generator and Eddy Brake Assy Fasteners*

*   Loosen to adjust second stage drive belt.
** Loosen to adjust first stage drive belt.

5. Place the belt tension gauge onto the first stage drive belt midway between the two pulleys and measure the tension.
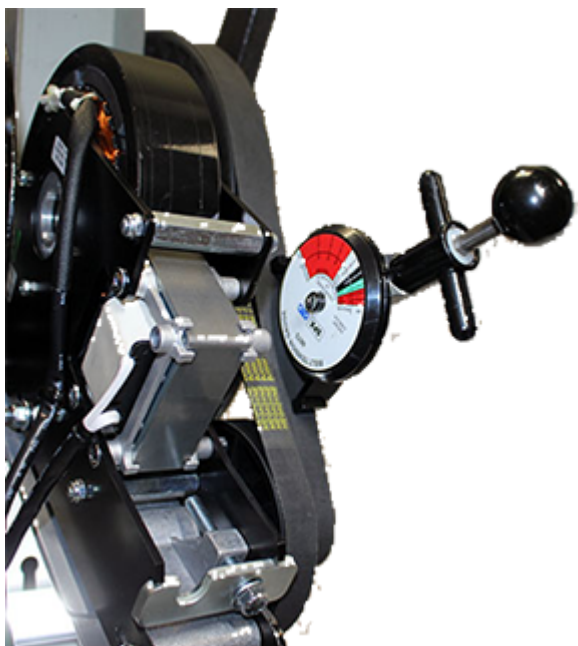
6. Remove the belt tension gauge. Use a 1/2" socket to decrease or increase the belt tension using the First Stage Belt Tensioner. Only make small incremental tension changes per adjustment.

IMPORTANT: The belt tension gauge must be removed while making tension adjustments or the measurement will be invalid.

⚠️ **CAUTION**: Make sure to that the two Drive Components Assembly fastener nuts are loosened before adjusting the tensioner. The tensioner hardware can be damaged by over tightening the adjustment bolt.

7. Use the crankarm to move the belt a couple of rotations. Place the belt tension gauge onto the first stage drive belt midway between the two pulleys and measure the tension. Verify that the belt tension is within [[[Undefined variable EFX800-16Base.spec-BeltTensionFirstStage-12]]]. If the tension is not within specification repeat the tension adjustment procedure.

First Stage Drive Belt

Second Stage Drive Belt

Second Stage Belt Tensioner

First Stage Belt Tensioner
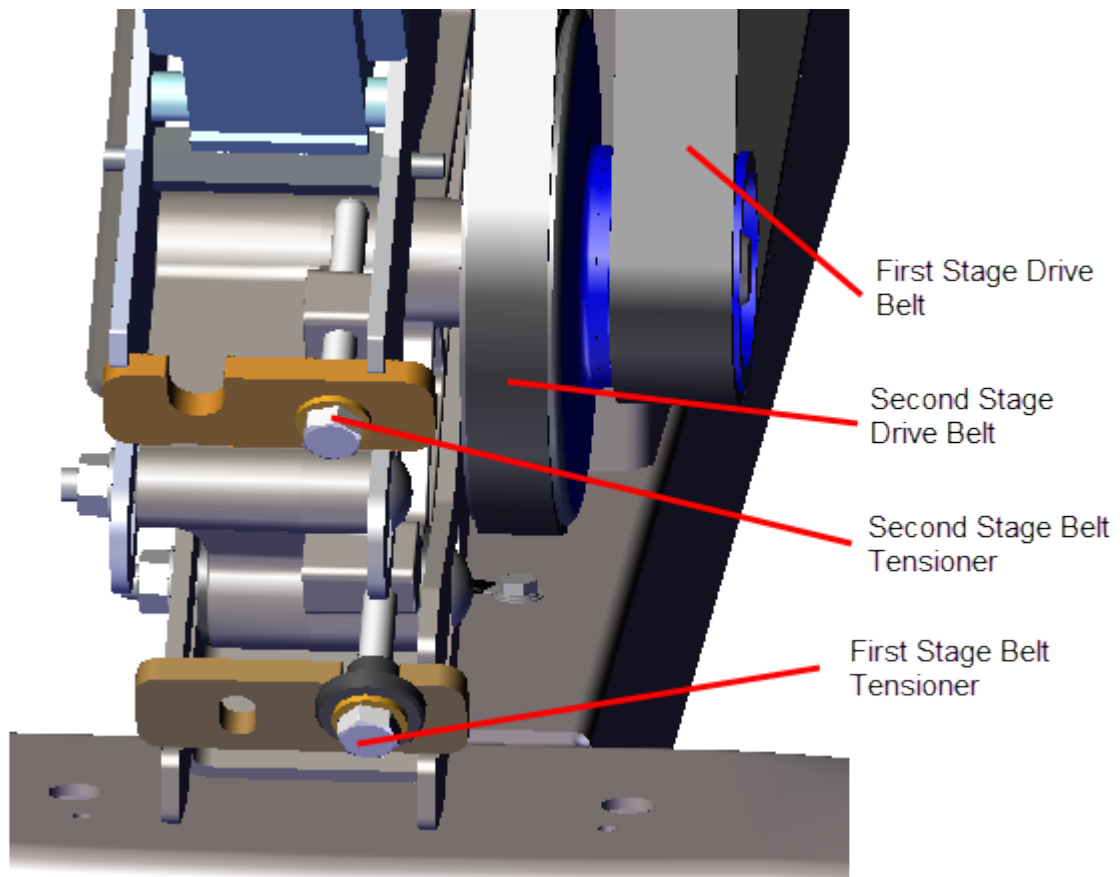
8. Use a 1/2" socket to tighten the two Drive Components Assembly fasteners (left side), torque fasteners to [[[Undefined variable EFX800-16Base.spec-DriveAssyBolts]]].

9. Reinstall the left drive disk cover, see "Drive Disk Covers Replacement" on page 57.

10. Reinstall the Drive Access Cover, see "Drive Access Cover Replacement" on page 56.

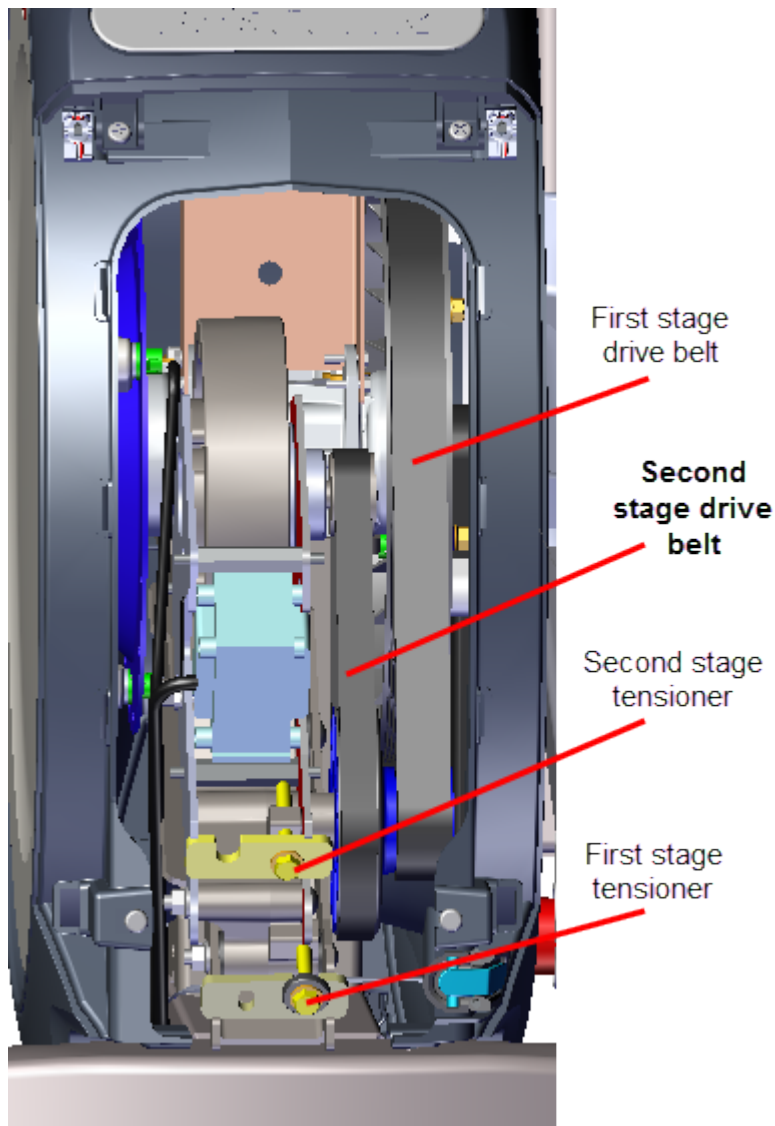11. Verify machine operation and return to service.

See Also

"Second Stage Drive Tension Adjustment" on the next page

Second Stage Drive Tension Adjustment

About

This procedure provides instruction to adjust the Second Stage Drive Belt tension.
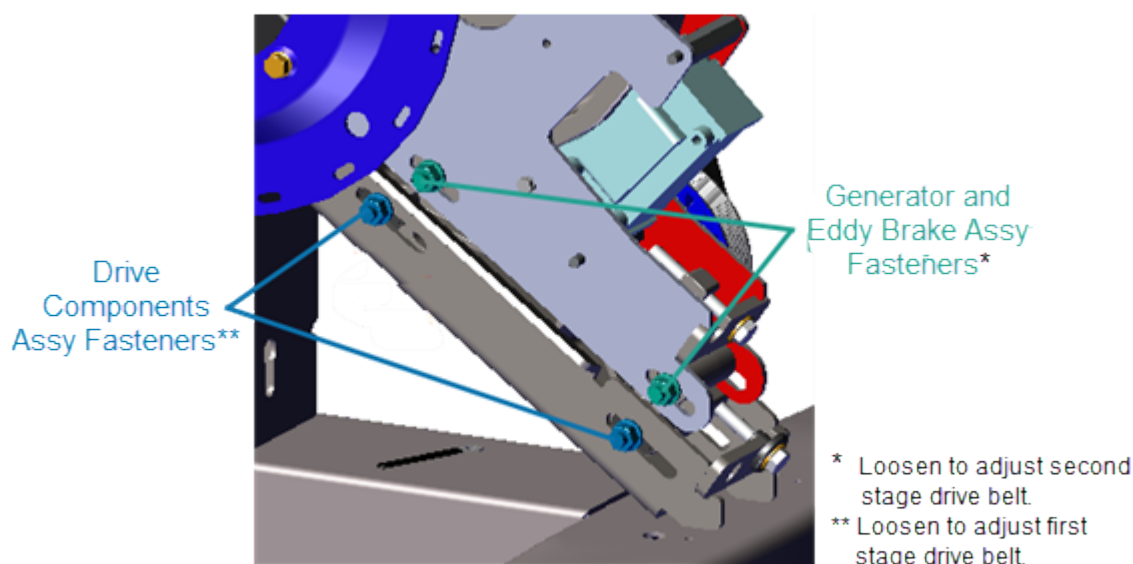

Specifications

System Component	Specification
Second Stage Belt Drive Tension - New	110-120 lbs (50- 54.4 kgs)
Second Stage Belt Drive Tension - Used	92 - 105 lbs (43 - 47.6 kgs)

System Component	Specification
Drive Component Assy Carriage Bolts	180 in-lbs (20.3 Nm)

Procedure

Review entire procedure before starting.

1. Remove the drive disk access cover, see "Drive Access Cover Replacement" on page 56.

2. Remove the left drive disk cover, see "Drive Disk Covers Replacement" on page 57.

3. Place the belt tension gauge onto the Second Stage Drive Belt midway between the two pulleys and measure the tension. If the tension is within specification belt tension, adjustment is not required. If the tension is not within [[[Undefined variable EFX800-16Base.spec-BeltTesnsionSecStage-8]]] continue with the belt tension adjustment.

4. Use a 1/2" socket to loosen the two Generator and Eddy Brake Assembly fastener nuts (left side)enough to allow assembly movement. Do not remove the fastener nuts.

Drive Components Assy Fasteners**

Generator and Eddy Brake Assy Fasteners*

* Loosen to adjust second stage drive belt.
** Loosen to adjust first stage drive belt.

5. Place the belt tension gauge onto the Second Stage Drive Belt midway between the two pulleys and measure the tension.

6. Remove the belt tension gauge. Use a 1/2" socket to decrease or increase the belt tension using the Second Stage Belt Tensioner. Only make small incremental tension changes per adjustment.

IMPORTANT: The belt tension gauge must be removed while making tension adjustments or the measurement will be invalid.

CAUTION: Make sure to that the two Generator and Eddy Brake Assembly fastener nuts are loosened before adjusting the tensioner. The tensioner hardware can be damaged by over tightening the adjustment bolt.

7. Use the crankarm to move the belt a couple of rotations. Place the belt tension gauge onto the Second Stage Drive Belt midway between the two pulleys and measure the tension. Verify that the belt tension is within [[[Undefined variable EFX800-16Base.spec-BeltTesnsionSecStage-8]]]. If the tension is not within specification repeat the tension adjustment procedure.
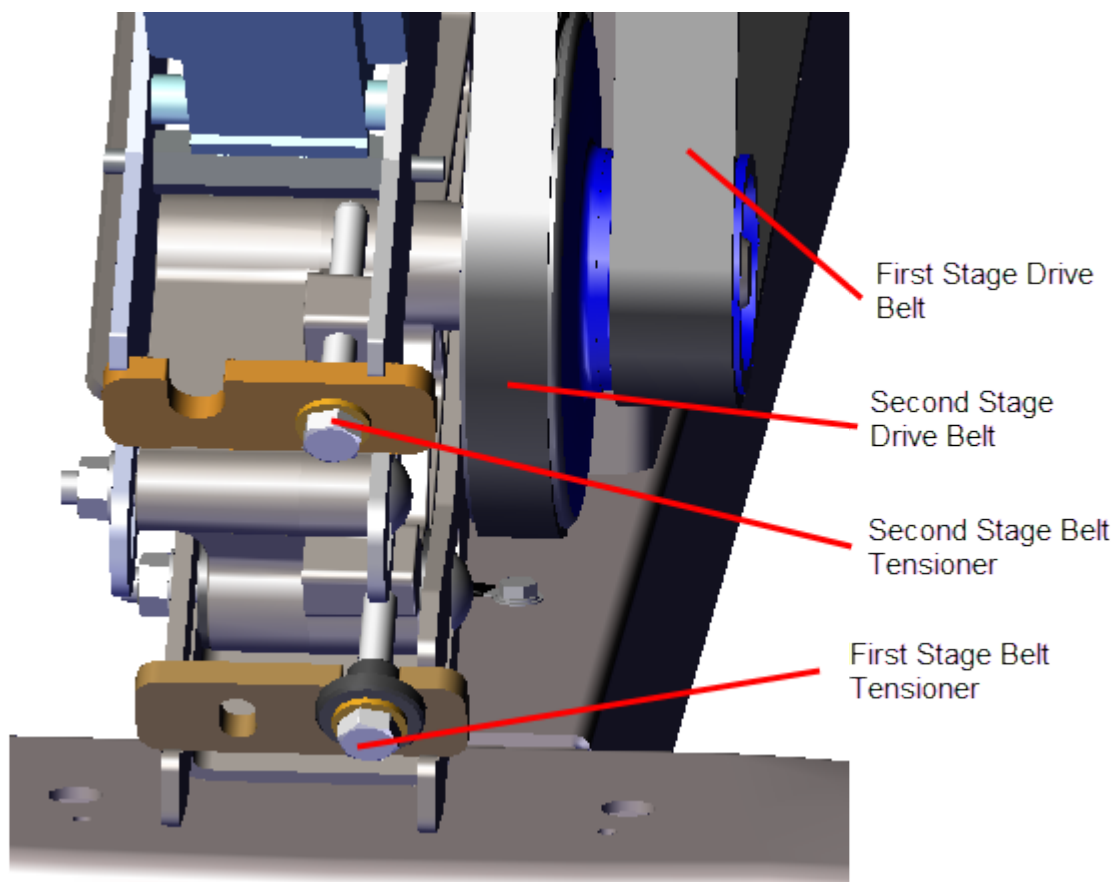
First Stage Drive Belt

Second Stage Drive Belt

Second Stage Belt Tensioner

First Stage Belt Tensioner

8. Use a 1/2" socket to tighten the two Generator and Eddy Brake Assembly fasteners (left side), torque fasteners to [[[Undefined variable EFX800-16Base.spec-DriveAssyBolts]]].

9. Reinstall the left drive disk cover, see "Drive Disk Covers Replacement" on page 57.

10. Reinstall the Drive Access Cover, see "Drive Access Cover Replacement" on page 56.

11. Verify machine operation and return to service.

See Also

"First Stage Drive Belt Tension Adjustment" on page 32

Lift Motor Calibration

About

This procedure provides instruction to verify and calibrate the Lift Motor and Incline system. The Lift Motor calibration should be verified anytime the Lift Motor fuse fails or is replaced or any incline system component is replaced.
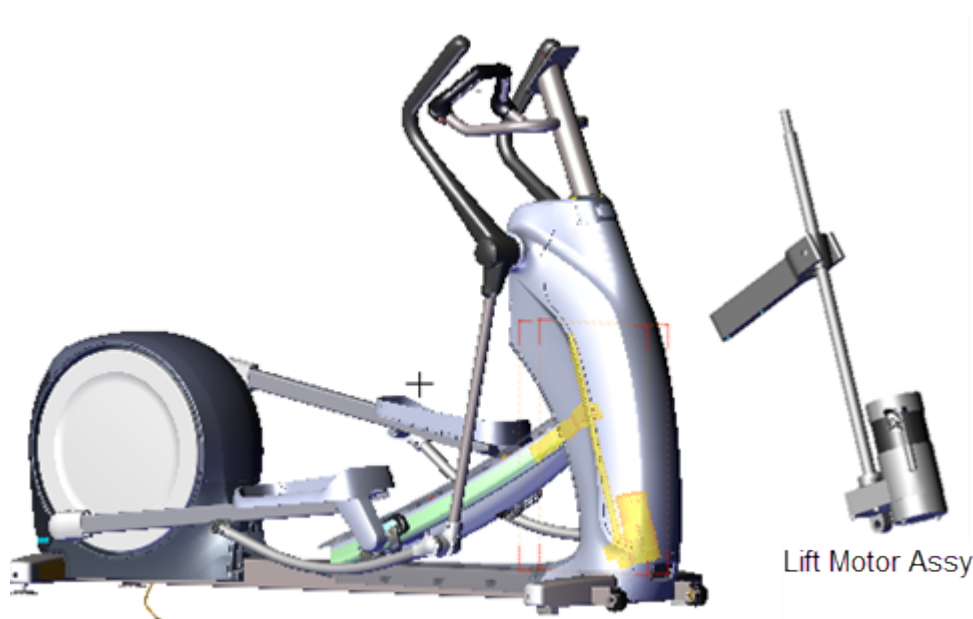
Lift Motor Assy

Specifications

| System Component	Specification
Lift Motor Calibration Distance*	9 in
Yoke/Ramp Fasteners	320 in-lbs (236.2 Nm)
Note: * Calibration distance is set at incline level 10.	

Procedure

Review entire procedure before starting.

1. Remove the Front Lift cover, Lift Interface Plate cover, and Ramp cover, see "Front Lift Cover Replacement" on page 49, ."Lift Interface Plate Cover Replacement" on page 51, and "Ramp Cover Replacement" on page 55.

2. .Access the diagnostic **CROSSRAMP TEST** (select **Pause** key > type **51765761** > select **MACHINE TEST** > **CROSSRAMP TEST**) . Set the ramp level to 10 and disconnect the Lift Motor Assembly input power/control cable.

WARNING: Make sure to disconnect the Lift Motor input power/control cable or it is possible for the crossramp to automatically lower to level 1 if either the pedals or arms are moved. This unexpected action could cause personal injury.

1. Measure and verify that the distance from the top of the jackscrew to the top of the yoke nut is [[[Undefined variable EFX800-16Base.spec-LiftMotorCal]]].
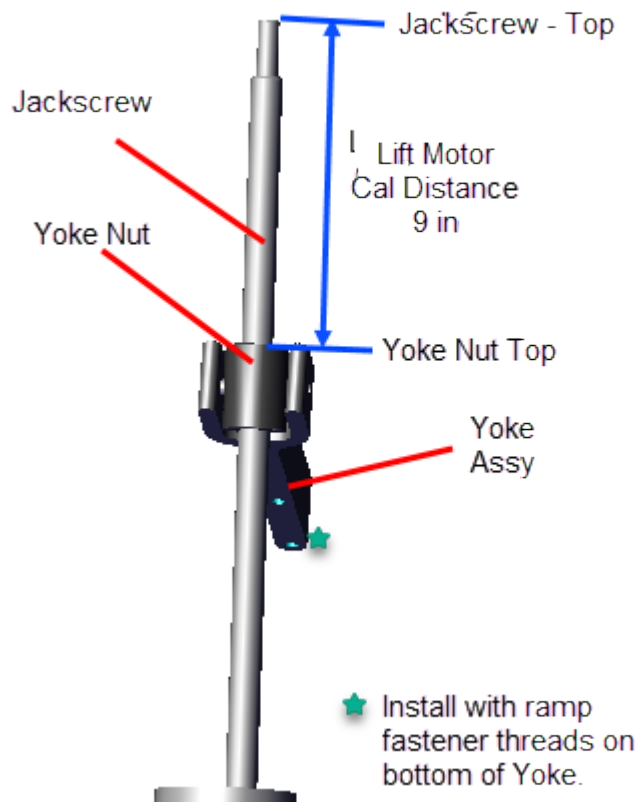
2. If the calibration distance is not to specification (lift motor calibration distance: [[[Undefined variable EFX800-16Base.spec-LiftMotorCal]]]), continue procedure to adjust the Lift Motor calibration distance to specification

3. Place a pad over the top of the Front Frame cover to protect the surface during the adjustment procedure. Place blocking material (hard foam or similar material) between the underside of the ramp and frame to support and keep the ramp in the raised position.

Ramp

Front Frame Cover

Blocking Foam (or similar material)
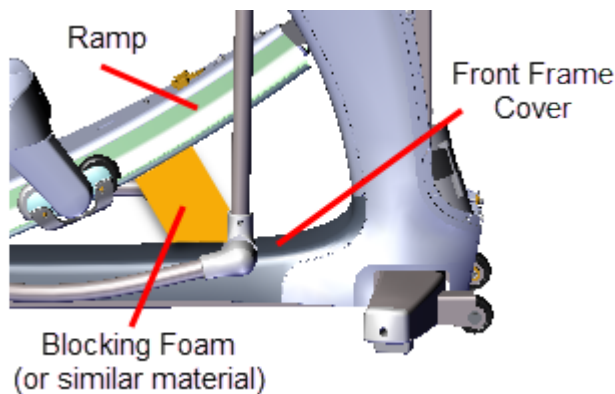
4. Use a 9/16" socket to remove the two ramp - ramp fasteners and remove the yoke from the ramp. Take Note that the ramp will fall when the fasteners are removed. Make sure the ramp is supported before removing the fasteners. Retain fastener hardware for installation.

Yoke Assy
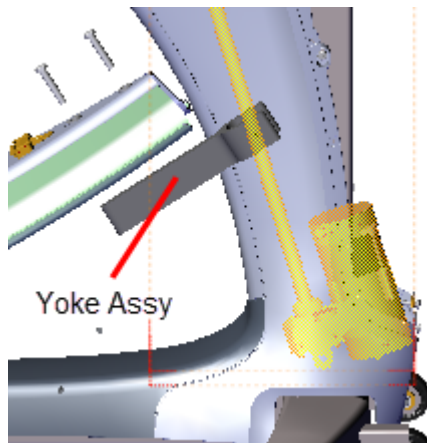
5. Use your hands to rotate the jackscrew to move the Yoke up or down as needed to adjust the calibration distance. The Yoke installation position may not allow the calibration distance to be exact. So rotate the jackscrew so that the Yoke Nut provides the closest plus or minus distance to 9 in.

6. Reattach the Yoke to the Ramp using the two fasteners, torque to 320 in-lbs (236.2 Nm).

7. Remove any blocking materials and pad.

8. Reconnect the input power/control cable.

9. Verify the elliptical incline operation through the full range of motion, levels 1 though 20. Do the **CROSSRAMP TEST** diagnostic test.

10. Reinstall the Front Lift, Lift Interface Plate, and Ramp covers, see "Front Lift Cover Replacement" on page 49, ."Lift Interface Plate Cover Replacement" on page 51 and "Ramp Cover Replacement" on page 55.

11. Verify elliptical operation and return to service.

5   Replacement Procedures

Replacement procedures provide you with the step-by-step instructions to remove and install system components.

Available Replacement Procedures

Battery Replacement

About

This procedure provides instruction to determine the condition of the battery to remove and install the Battery.
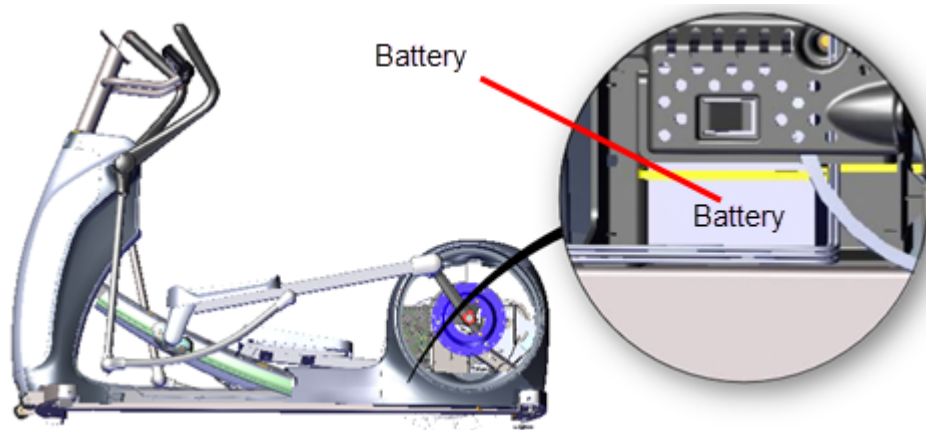
Determining the battery condition

Use the service software Hardware Validation **BATTERY TEST** to determine the battery condition and voltage, see Hardware Validation Diagnostic Tests (51765761).

BATTERY TEST

|	
Format	XX.X VDC YY
where	XX.X is the measured battery voltage in VDC (nominal 12.6 - 14.6 Vdc).
	VDC: DC volts
	Y is the information suffix:
	C: external AC charger connected.
	L: Battery is low (less than 11.4 volts).
	CL: Charger is connected and battery is low.

Battery Fuse

The battery inline fuse holder is part of the battery assembly cable attached to the battery positive terminal. To remove the fuse, twist the buse holder top cap and remove.
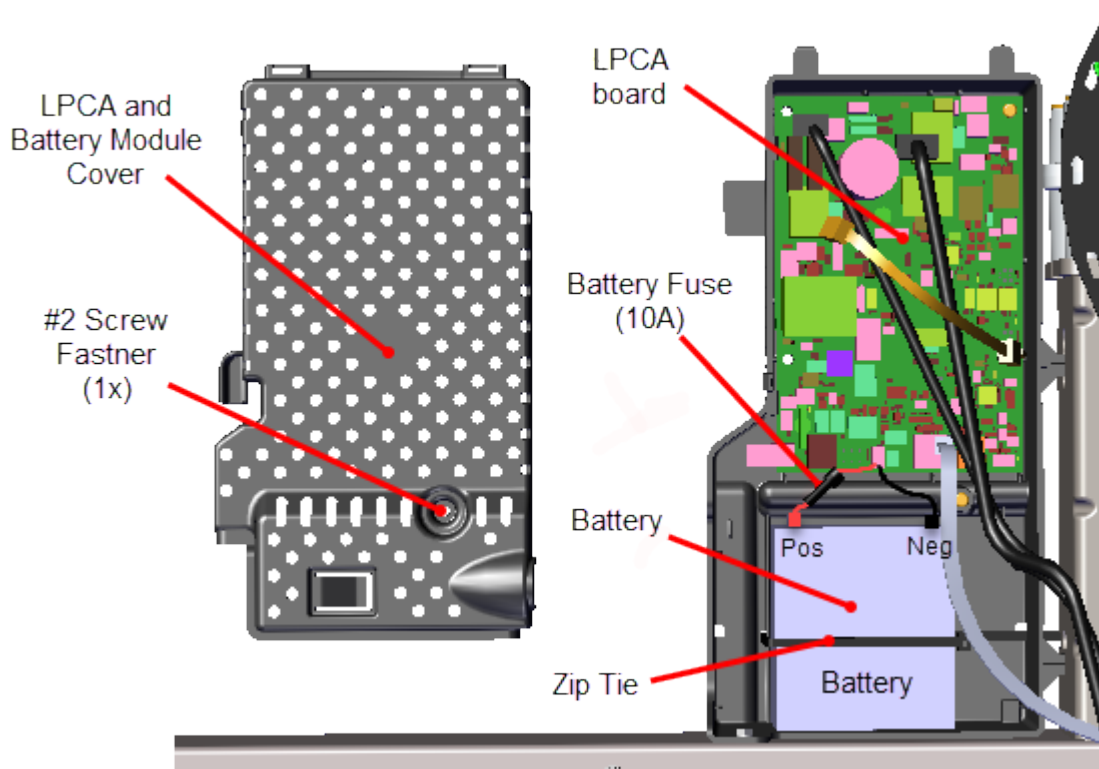
Fuse Type: Inline 10 Amp slow blow fuse, .25" diameter
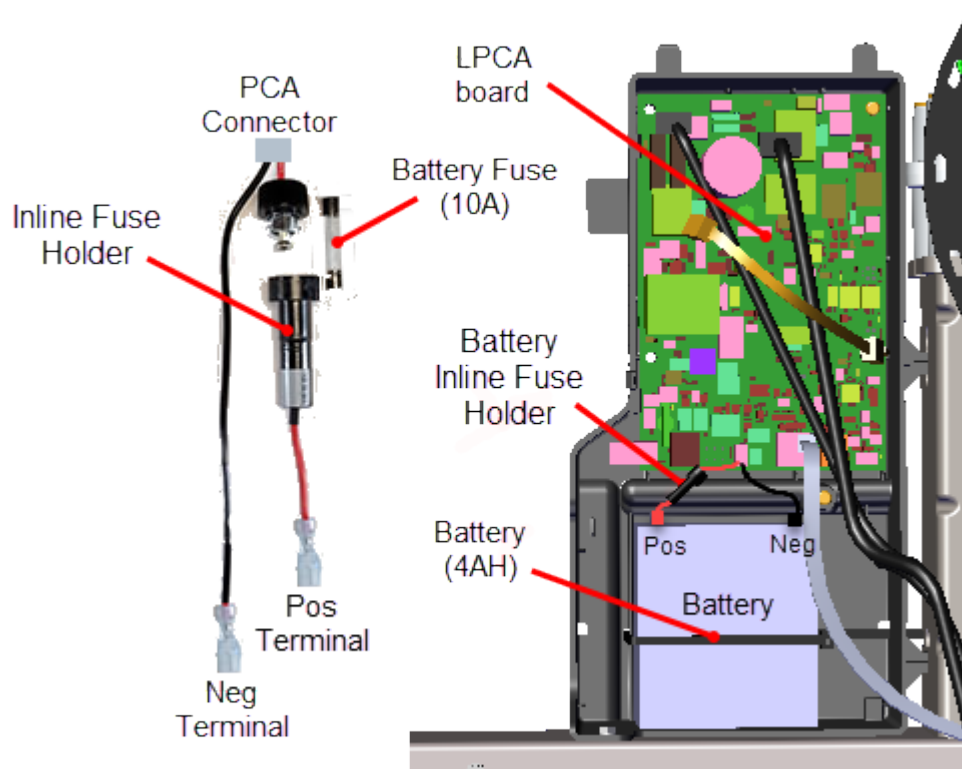
Removal Instructions

Review entire procedure before starting.

1. Remove the left drive disk cover, see "Drive Disk Covers Replacement" on page 57.
2. Remove the one #2 Phillips screw fastener and LPCA[1]/Battery Module cover. Retain fastener hardware for installation.

[1]Lower PCA board

3. Disconnect the negative battery cable (black terminal) and then the positive battery cable (red terminal).

4. If installed, cut the zip tie.

5. Remove the battery.

Installation Instructions

1. Reconnect the positive cable to the positive terminal (red) and then the negative battery cable to the negative terminal.(black).

2. Reinstall the battery.

3. Make sure the positive wire remains securely connected thru the inline fuse to the LPCA board.

4. Make sure the negative wire remains securely connected to the frame weldment.

5. Reinstall the LPCA/Battery module cover using the one #2 Phillips screw fastener.

6. Reinstall the left drive disk cover, see "Drive Disk Covers Replacement" on page 57.

7. Verify machine operation and return to service, see "Operation Verification" on page 11.

Covers and Panels Replacement

About

These procedure provides instruction to remove and install the EFX covers and panels.
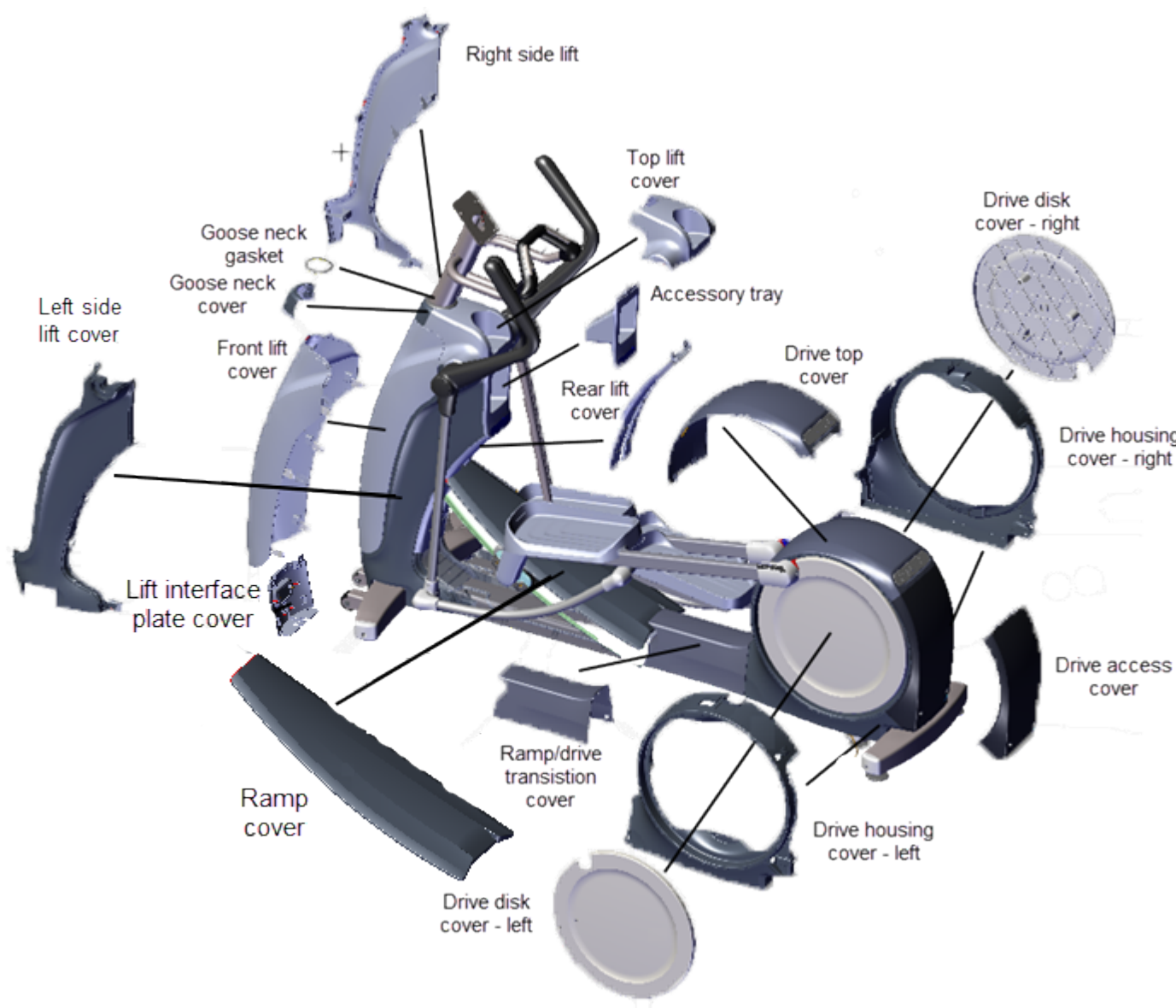
Cover	Remove/Install Procedure
Goose Neck Cover	"Front Lift Cover Replacement" on page 49
Top Lift Cover	"Front Lift Cover Replacement" on page 49
Front Lift Cover	"Front Lift Cover Replacement" on page 49
Lift Interface Plate Cover	"Lift Interface Plate Cover Replacement" on page 51

Cover	Remove/Install Procedure
Accessory Tray	"Accessory Tray Cover Replacement" on page 53
lift Interface Plate	"Lift Interface Plate Cover Replacement" on page 51
Ramp Cover	"Ramp Cover Replacement" on page 55
Ramp-to-Drive Transition Cover	"Drive Housing Covers Replacement" on page 59
Drive Access Cover	"Drive Access Cover Replacement" on page 56
Drive Disk Covers	"Drive Disk Covers Replacement" on page 57
Drive Top Covers	"Drive Housing Covers Replacement" on page 59
Drive Housing Covers	"Drive Housing Covers Replacement" on page 59

Cover Replacement Procedures

Front Lift Cover Replacement

Front Lift Cover Replacement

1. Removing the front lift cover **4** requires first removing the goose neck gasket **1** and cover **2**, and the top lift cover **3**.

Insert nylon
tip
screwdriver
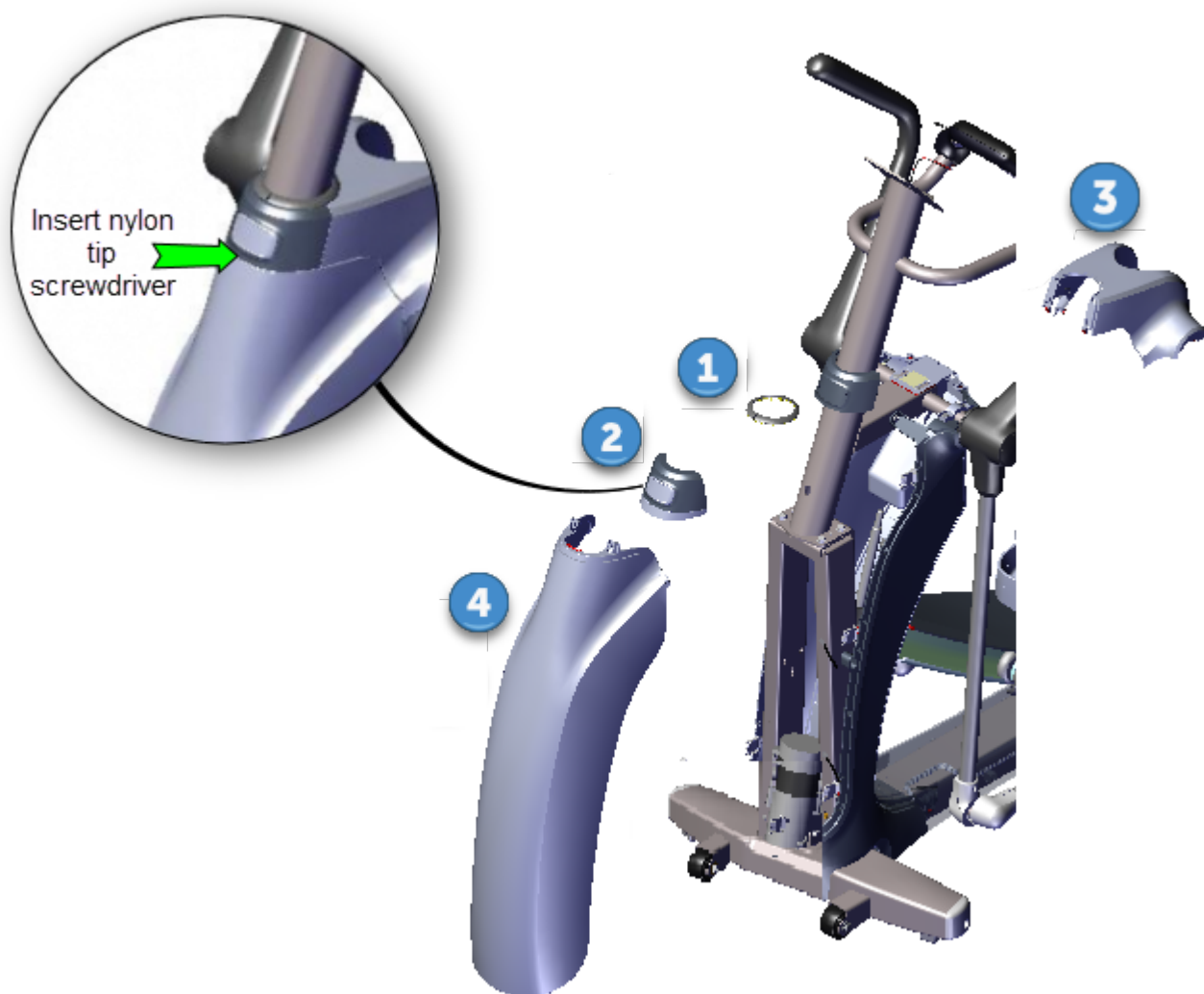
ID	Description
1	Goose Neck Gasket
2	Goose Neck Cover
3	Top Lift Cover
4	Lift Cover

Removal Instructions

2. Use a nylon tipped screwdriver (or similar plastic device) to unsnap the goose neck cover ② and gasket ① from the top of the front lift cover ④ . Carefully insert the nylon tip of the screwdriver at the front center between the goose neck cover and front lift cover seam, While inserting the nylon tip apply pressure to unsnap the goose neck cover and gasket in an upward direction. Remove the goose neck gasket and cover.

⚠️ **CAUTION**: Only use plastic tipped screwdrivers (or similar devices) to unsnap the goose neck cover Metal tipped devices will scratch the surfaces and damage the covers.

3. Use your fingers to unsnap and lift the top lift cover ③ from the top of the front lift cover ④ and accessory tray cover tabs.

4. Use your fingers to unsnap and lift the front lift cover ④ from the side cover tabs to remove.

Installation Instructions

1. Position the bottom of the front lift cover ④ onto bottom front of the EFX base and press into tabs. Then position the top cover onto the side cover tabs and press to lock in place.

2. Use your fingers to position the top lift cover ③ onto the accessory tray and front lift cover ④ .tabs and press to lock in place.

3. Use your fingers to position the goose neck cover ② onto the front lift cover ④ tabs and press to lock in place.

4. Reinstall the goose neck gasket ① onto the display mount post and press into position onto the top of goose neck flange opening.

Lift Interface Plate Cover Replacement

Lift Interface Plate Cover Replacement
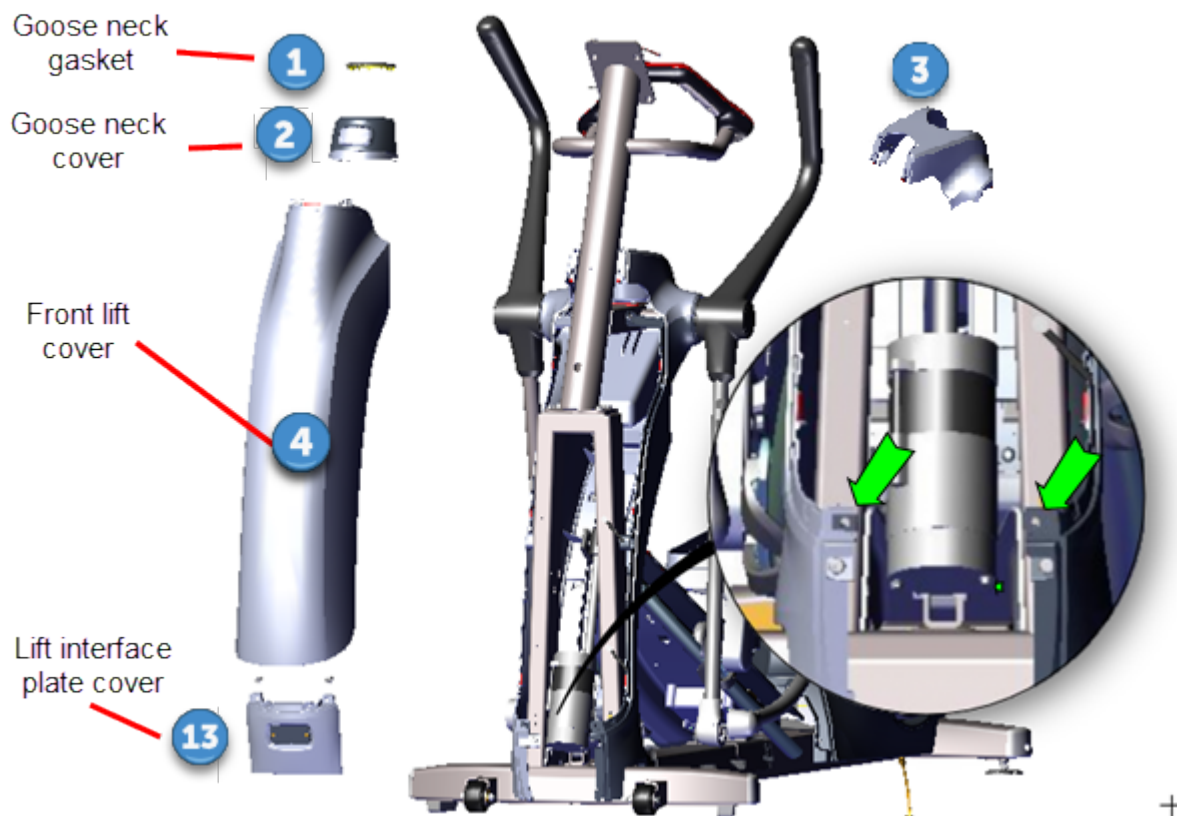
ID	Description
1	Goose Neck Gasket
2	Goose Neck Cover
3	Top Lift Cover
3	Front Lift Cover
13	Lift Interface Plate Cover

Removal Instructions

1. Remove the goose neck gasket 1 , goose neck cover 2 , top lift cover 3 , and front lift 3 cover, see "Front Lift Cover Replacement" on page 49.

2. Remove the two #2 Phillips screw fasteners and remove the lift interface plate cover 13 . Retain fastener hardware for installation.

Installation Instructions

1. Reinstall the lift interface plate cover **13** and secure with the two #2 Phillips screw fasteners.

2. Reinstall the front lift **3**, top lift cover **3**, goose neck cover **2**, and goose neck gasket **1** cover, see "Front Lift Cover Replacement" on page 49.

Accessory Tray Cover Replacement

Accessory Tray Cover Replacement
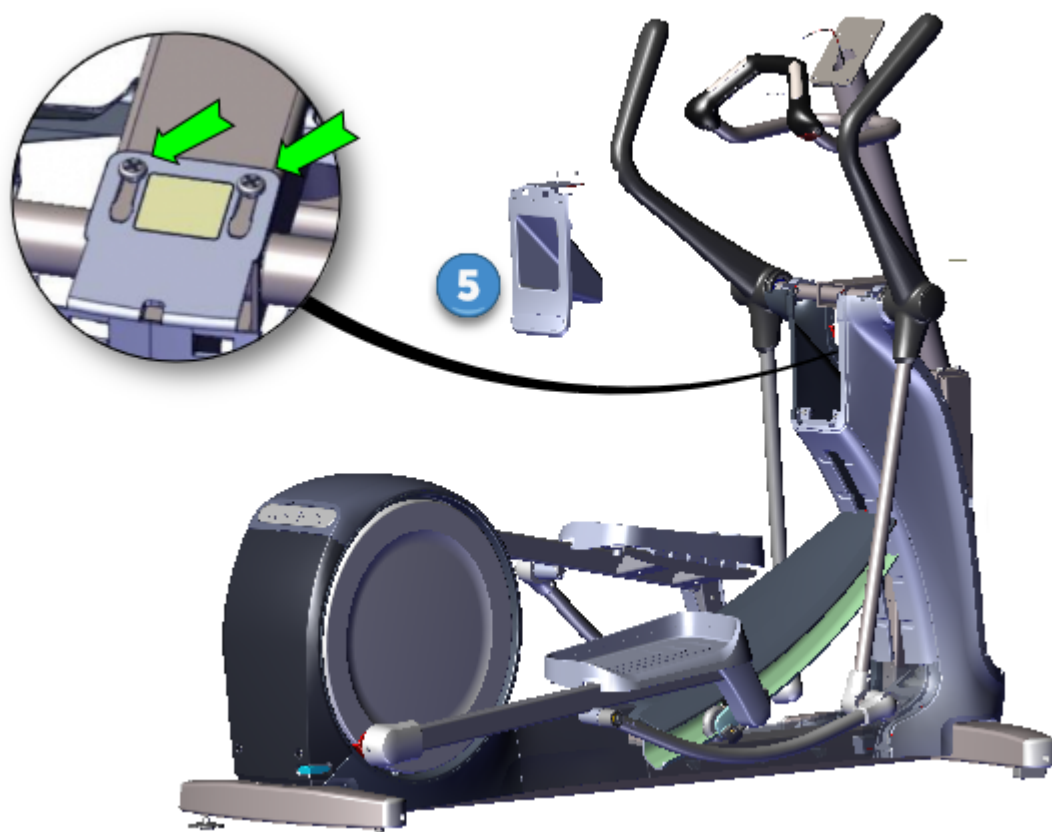
ID	Description
5	Accessory Tray cover

Removal Instructions

1. Remove the goose neck gasket, goose neck, and top lift covers, see "Front Lift Cover Replacement" on page 49.

2. Remove the two #2 Phillips fasteners and remove the accessory tray cover 5 . Retain fastener hardware for installation.

Installation Instructions

1. Reinstall the accessory tray and secure with the #2 Phillips screw fasteners.

2. Reinstall the top lift cover, goose neck cover, and the goose neck gasket, see "Front Lift Cover Replacement" on page 49.

Ramp-to-Drive Transition Cover Replacement

Ramp-to-Drive Transition Cover Replacement
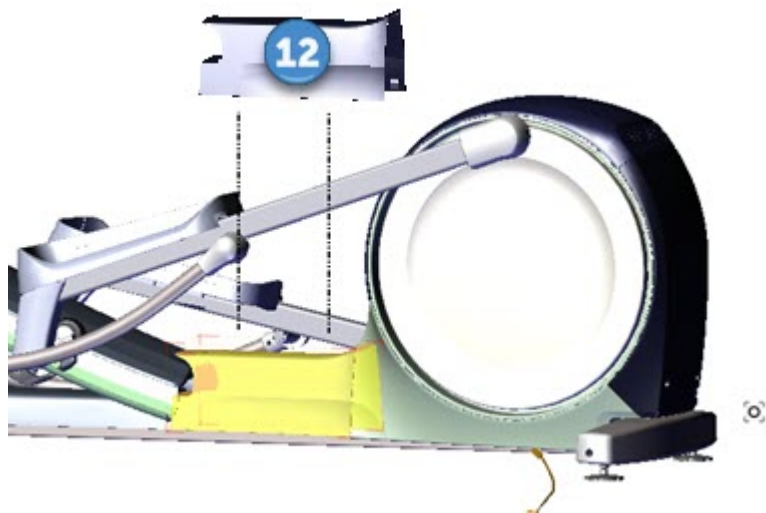
ID	Description
12	Drive Access Cover

Removal Instructions

Remove the ramp-to-drive transition cover 12 by lifting upward to unsnap the mounting clips.

Installation Instructions

Reinstall the ramp-to-drive transition cover 12 by positioning the cover over the ramp and drive housing covers and pressing down to snap the mounting tabs in place.

Ramp Cover Replacement

Ramp Cover Replacement
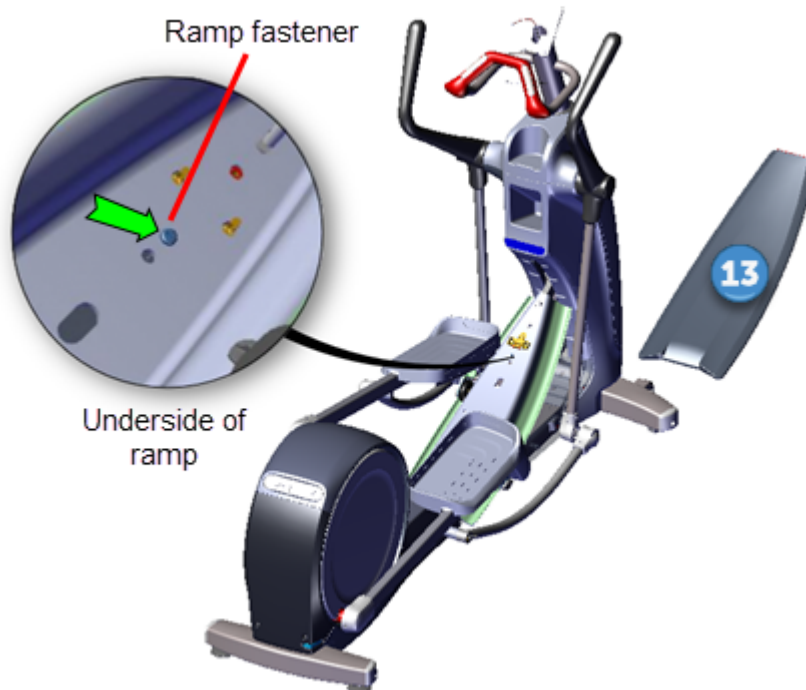
Removal Instructions

1. Use a short stub #3 screwdriver to remove the fastener located on the underside front of the ramp platform. Lift the front of the ramp cover **13** and slide forward to remove from retaining clips. Retain fastener hardware for installation.

Installation Instructions

1. Reinstall ramp cover **13** by inserting the rear tabs into the rear ramp platform mounting clips and then pressing down (and/or using the palm of your hand to lightly strike the top of the ramp) on the top front of the ramp to snap into the front bracket clip. Verify that the ramp clips are correctly engaged by grabbing the ramp sides and gently attempting to move and lift the ramp off the platform.

2. Secure ramp **13** by reinstalling the #3 Phillips screw fastener and fully tighten.

Drive Access Cover Replacement

Drive Access Cover Replacement
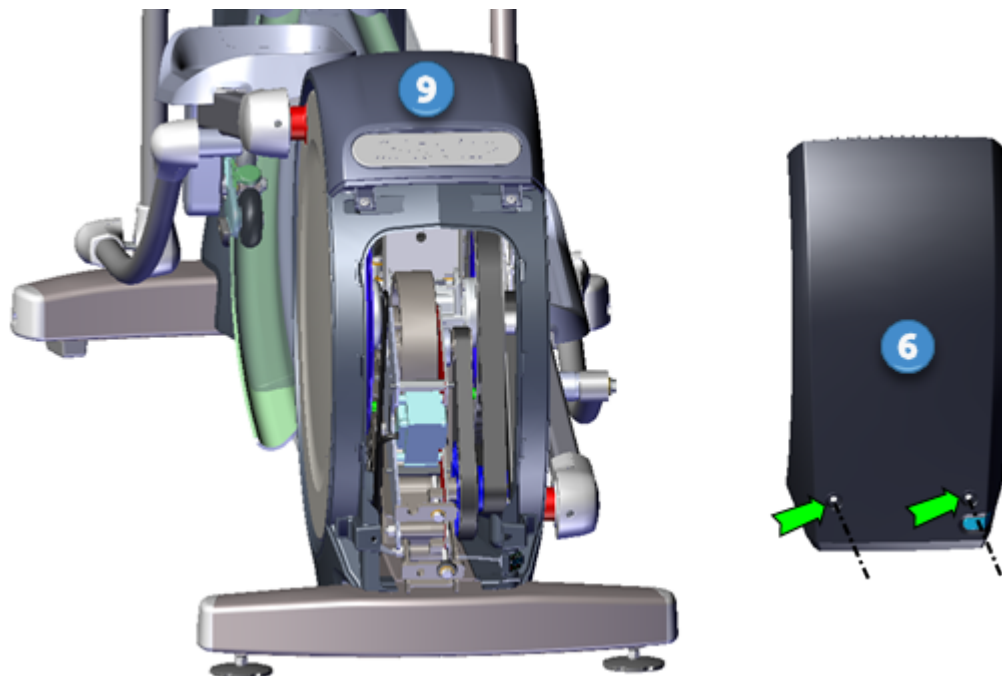
ID	Description
6	Drive Access Cover
9	Drive Top Cover

Removal Instructions

1. Use a #3 Phillips screwdriver to remove the two fasteners located at the bottom of the drive access cover 6. Slide the access panel downward and away from the frame to remove. Retain fastener hardware for installation.

Installation Instructions

1. Slide the top of the drive access cover 6 under the lip of the drive top cover 9 and then pressing the cover into position over the access cover opening.
2. Secure cover with the two # 3 Phillips screw fasteners.

Drive Disk Covers Replacement

Drive Disk Covers Replacement
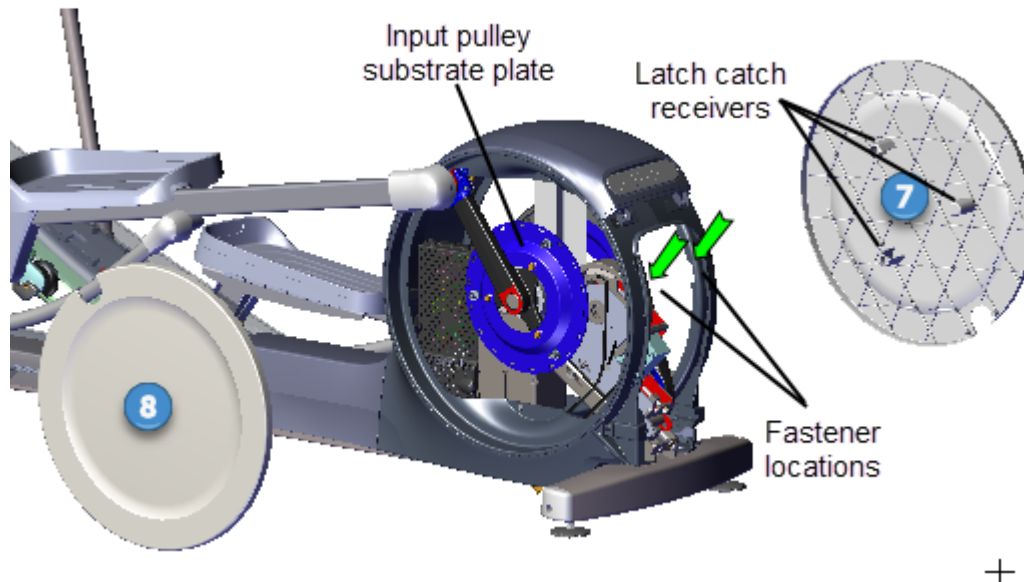
ID	Description
7	Drive Disk Cover - right
8	Drive Disk Cover - left

Removal Instructions

Repeat this procedure for both the right and left drive disk covers.

1. Remove the drive access cover, see "Drive Access Cover Replacement" on the previous page.

2. Use the crankarm to rotate the drive disk cover (7 right, 8 right) to provide access to the mounting bracket and the #2 Phillips screw fastener (there is an indent in the upper inside of the drive housing cover). Use a #2 Phillips screwdriver to remove the fastener (one screw per side). Retain fastener hardware for installation.

Drive disk cover mounting screw
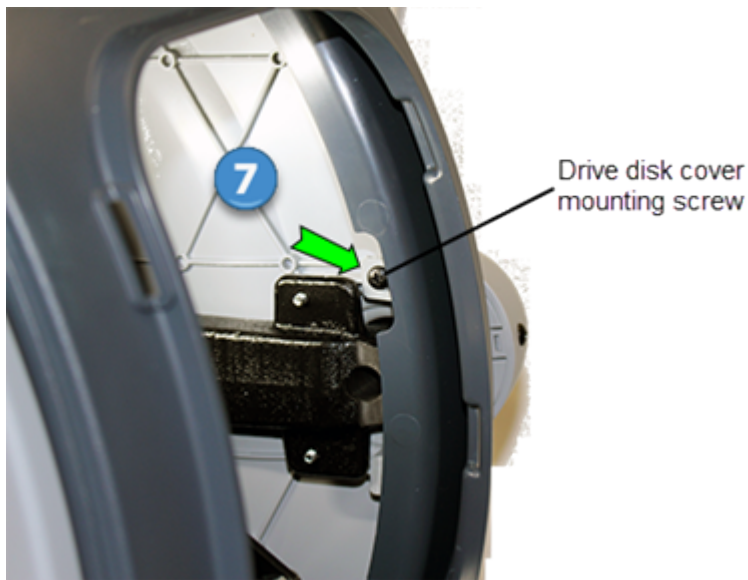
IMPORTANT: Be careful to not allow the screw to drop to the bottom of the drive housing area while removing. It may be very difficult to retrieve the dropped screw.

3. Press or lightly tap the disk from the inside outward away from the frame to remove.

Installation Instructions

Repeat this procedure for both the right and left drive disk covers.

1. Position the drive disk cover over the crankarm and press the cover (**7** right, **8** right) onto the three latch catch pins located on the input pulley substrate plate.

2. Use the crankarm to rotate the drive disk cover to the drive housing indent (located at the inside upper right/left side of the frame) to provide access to the mounting bracket. Use a #2 Phillips screwdriver to secure the two drive disk cover fasteners.

3. Reinstall the drive access cover, see "Drive Access Cover Replacement" on page 56.

Drive Housing Covers Replacement

Drive Housing Covers Replacement
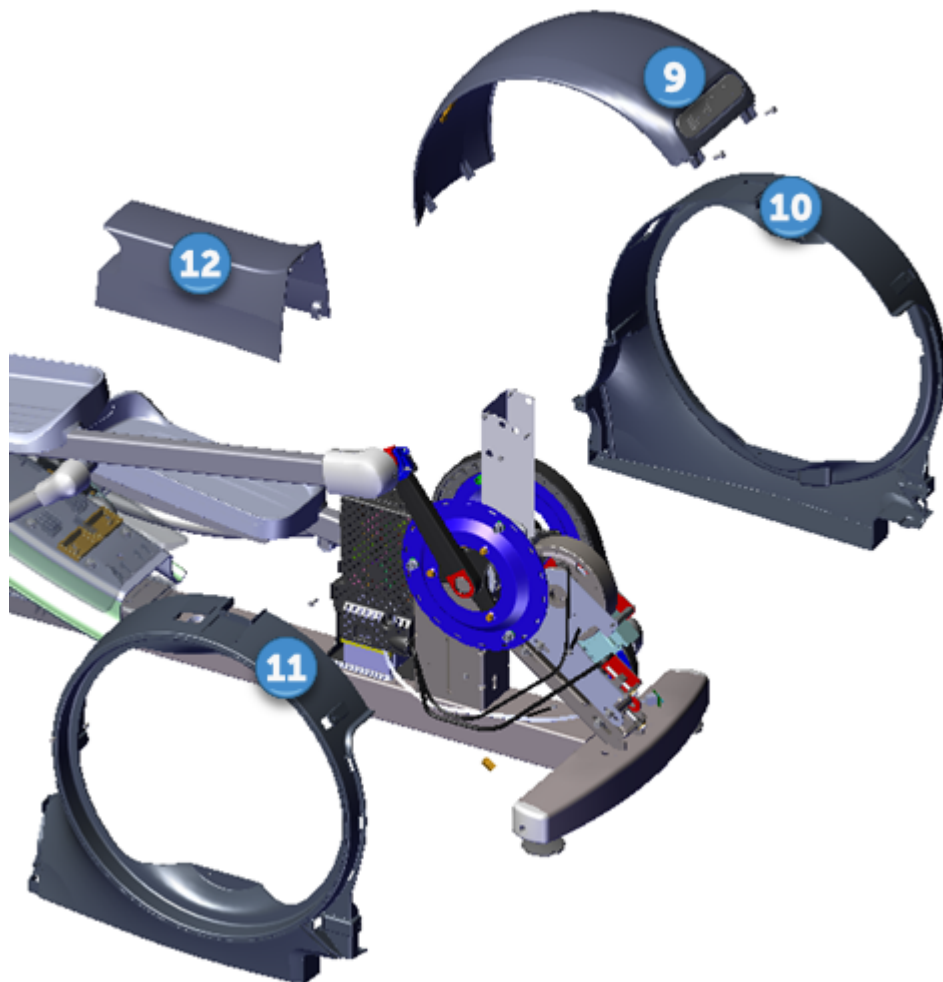
ID	Description
9	Drive Top Cover
10	Drive Housing Cover - Right
11	Drive Housing Cover - Left
12	Ramp-to-Drive Transition Cover

Removal Instructions

Repeat this procedure for both the right and left drive housing covers.

1. Remove the drive access cover, see "Drive Access Cover Replacement" on page 56.

2. Remove the left and right drive disk covers, see "Drive Disk Covers Replacement" on page 57.

3. Repeat steps to remove the left and right stairarms from the crankarm spindle:

a. Remove the #2 Phillips screw fastener and slide the Outer Pivot Block cover rearward and away from the frame to remove. Retain fastener hardware for installation.

b. Remove the #3 Phillips Nylok patch Retention Plate fastener and the Crankarm Retention Plate. Discard the fastener bolt and retain the Crankarm Retention Plate for installation.

⚠️ **CAUTION**: Do not reuse the removed Retention Plate Nylok patch bolt fasteners for installation. Discard the removed bolts and order new bolts for installation.

c. Use external retaining ring pliers to remove the stairarm pivot block retaining ring. Retain fastener hardware for installation.

d. Remove the stairarm off the crankarm spindle and carefully lay on the ground.

e. Take note of the pivot block inner wave washer and flat washer. Make sure to not loose these items, they will be required for installation.

4. Remove the ramp-to-drive transition cover 12 by lifting upward to unsnap the mounting clips.

5. Remove the drive top cover:

a. Remove the two top cover 9 #3 Phillips screw fasteners. Retain fastener hardware for installation.
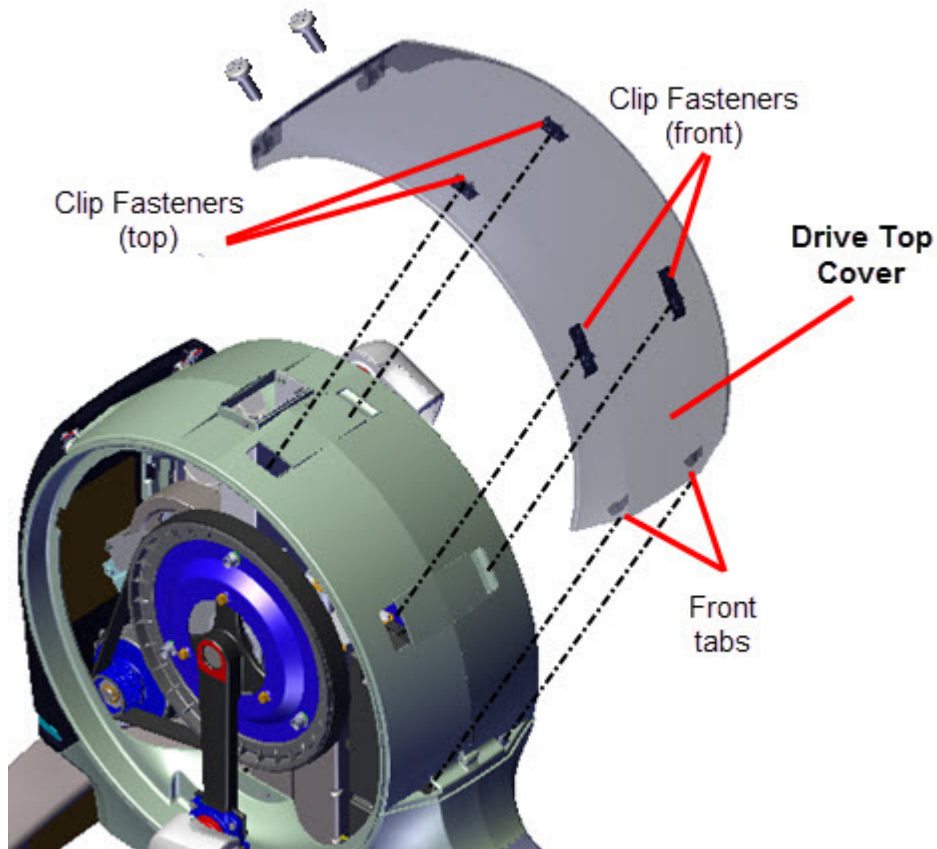
b. Straddle the rear housing and reach into the underside of the top cover to unsnap the left and right front clip fasteners. Simultaneously use your thumbs to press down on the top of the clips while using your forefingers to grab and lift upward on the bottom of the clips to release. Continue to slide the top cover forward and lift up to remove.

Clip fasteners (front)

Drive Top Cover - front underside

1. Use a 5/16" socket to remove the six screw fasteners from the left drive housing cover **11**. Carefully slide the cover over the crankarm and remove. Retain fastener hardware for installation.

Note: The left drive housing cover must be removed prior to removing the right cover.
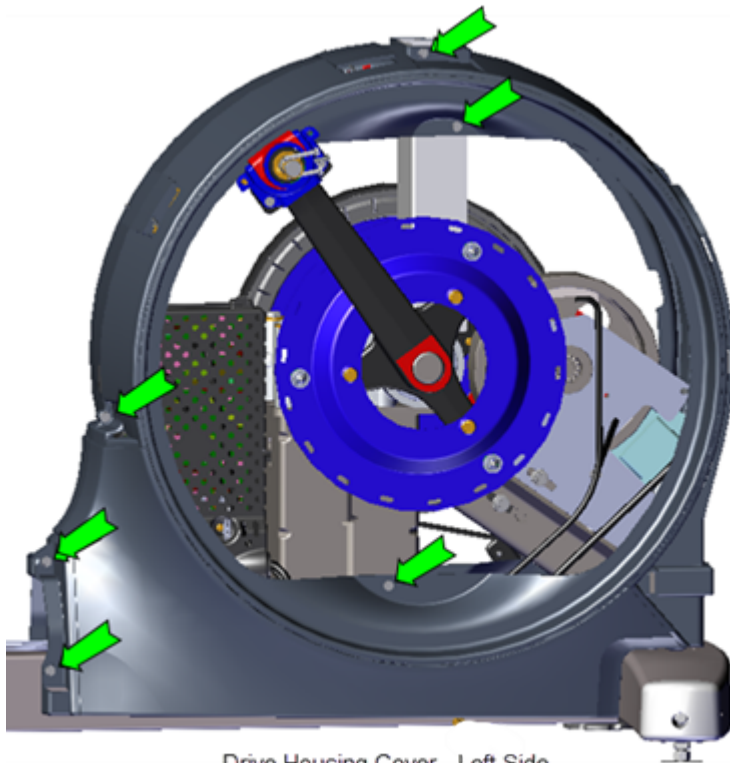
Drive Housing Cover - Left Side

2. Use a 5/16" socket to remove the four screw fasteners from the right drive housing cover 🔟. Unplug the ASL[1] light input cable. Carefully slide the cover over the crank-arm and remove. Retain fastener hardware for installation.

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[1]Active Status Light: Service and maintenance status light.
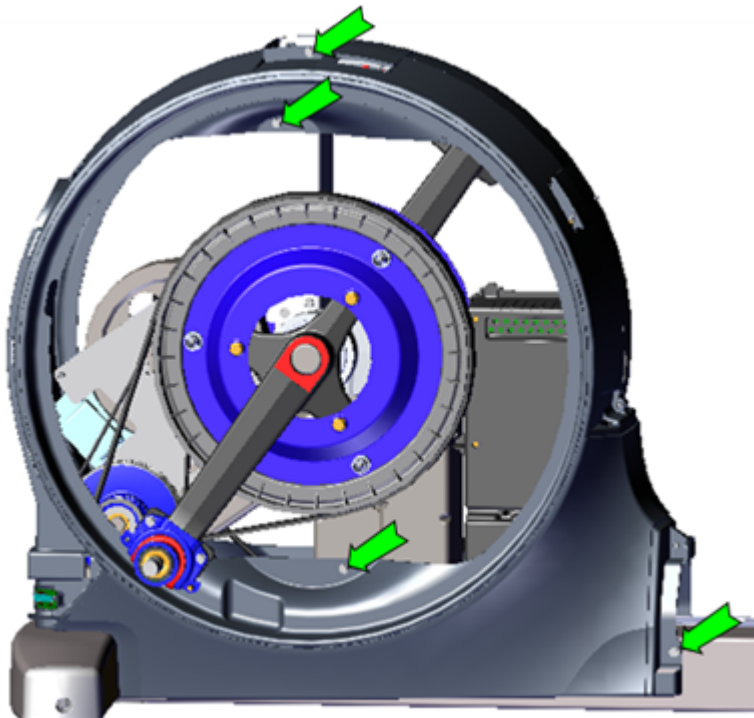
Drive Housing Cover - Rignt Side

Installation Instructions

1. Carefully slide the right drive housing cover 10 over the crankarm. Reconnect the ASL light input cable. Place the cover into position and use a 5/16" socket to reinstall the four screw fasteners.

2. Carefully slide the left drive housing cover 11 over the crankarm. Place the cover into position and use a 5/16" socket to reinstall the five screw fasteners.

3. Reinstall the drive top cover 9 . Position the top cover onto the housing and while applying light pressure first insert the top housing clips and then simultaneously inserting the top cover front tabs into the front housing mounts and inserting the front clips into the front housing brackets. Make sure the top cover clips are secure and install the two #3 Phillips screw fasteners.
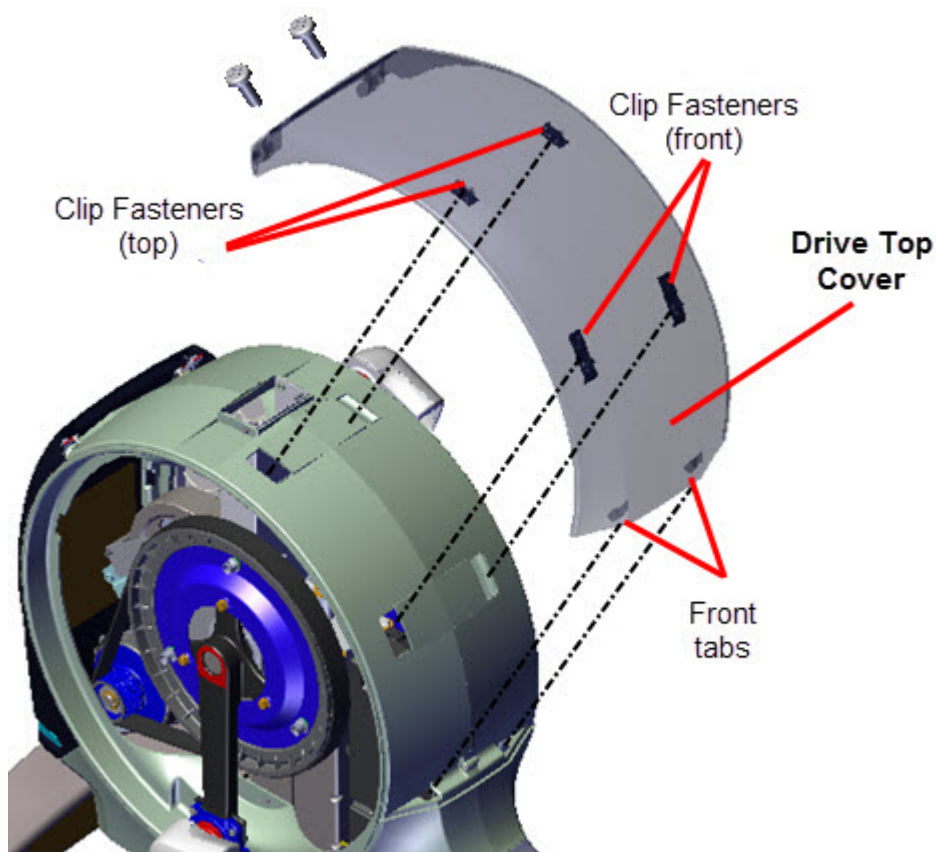
4. Reinstall the ramp-to-drive transition cover 12. Press on cover to securely lock tabs in place.

5. Reinstall the left and right stairarms.. Repeat procedure for the left and right stairarms.
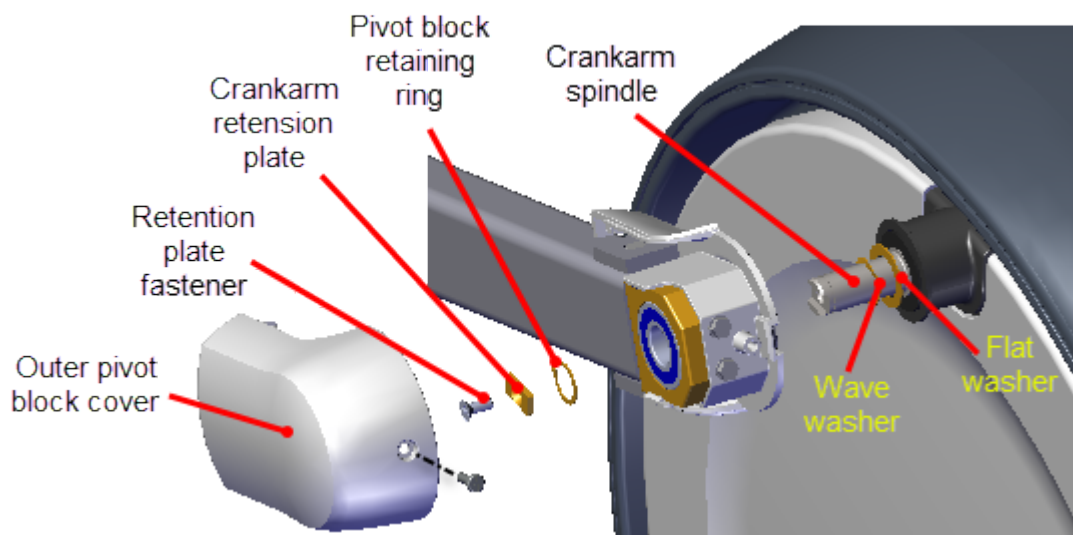
a. Make sure the pivot block inner flat washer and wave washer are installed in the order shown on the crankarm spindle (flat washer then wave washer). Then slide

the stairarm onto the crankarm spindle.

b. Reinstall the pivot block retaining ring.

c. Reinstall the Crankarm Retention Plate and secure with a new Nylok patch fastener. Torque to [[[Undefined variable Specifications.EFX16-Crank-armRetentionPlate]]].

⚠️ **CAUTION**: Do not reuse the removed Retention Plate Nylok patch bolt fasteners for installation. Discard the removed bolts and order new bolts for installation.

d. Reinstall the outer Pivot Block cover and secure with the #2 Phillips screw fastener.

6. Reinstall the left and right drive disk covers, see "Drive Disk Covers Replacement" on page 57.

7. Reinstall the drive access cover, see "Drive Access Cover Replacement" on page 56.

8. Verify the machine operation and return to service.

First Stage Drive Belt Replacement

About

This procedure provides instruction to remove and install the First Stage Drive Belt.

Specifications

System Component	Specification
First Stage Belt Drive Tension - New	140-150 lbs (63.5 - 68 kgs)
First Stage Belt Drive Tension - Used	125 - 135 lbs (56.7 - 61 Kgs)
Drive Component Assy Carriage Bolts	180 in-lbs (20.3 Nm)

Procedure

Review entire procedure before starting.

Removal Instructions

1. Remove the drive access cover, see "Drive Access Cover Replacement" on page 56.

2. Remove the right and left drive disk covers, see "Drive Disk Covers Replacement" on page 57.

3. Remove the right Stairarm, see "Stairarm Replacement" on page 117.

4. Use a 1/2" socket to loosen the two Drive Components Assembly fastener nuts (left side)enough to allow movement. Do not remove the fastener nuts.
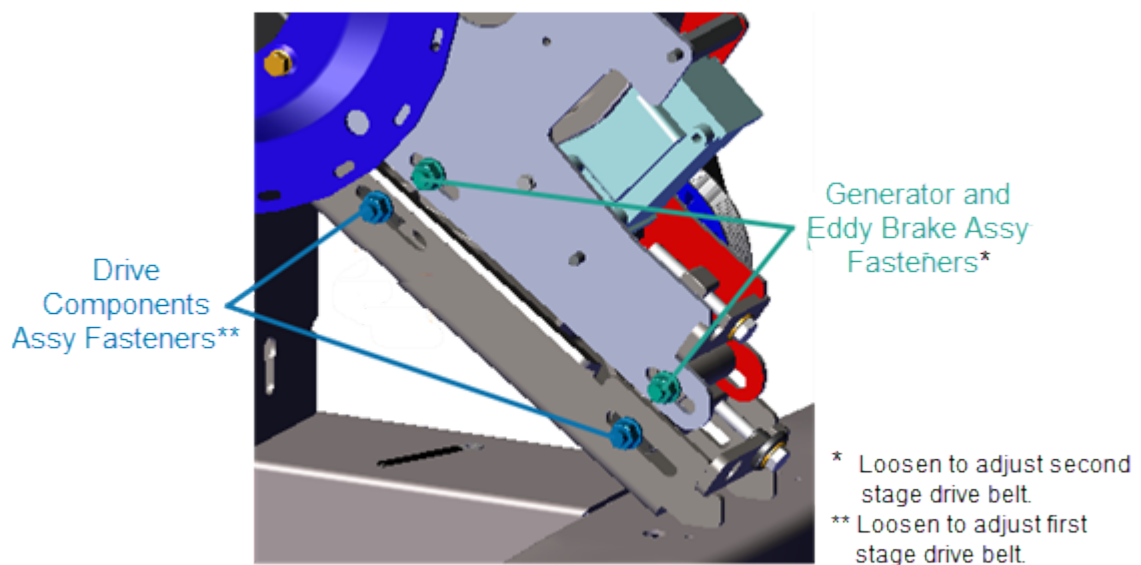
5. Use a 1/2" socket to loosen first stage belt tension and walk the first stage drive belt off the pulleys. Remove the first stage drive belt.

First Stage Drive Belt

Second Stage Drive Belt

Second Stage Belt Tensioner

First Stage Belt Tensioner
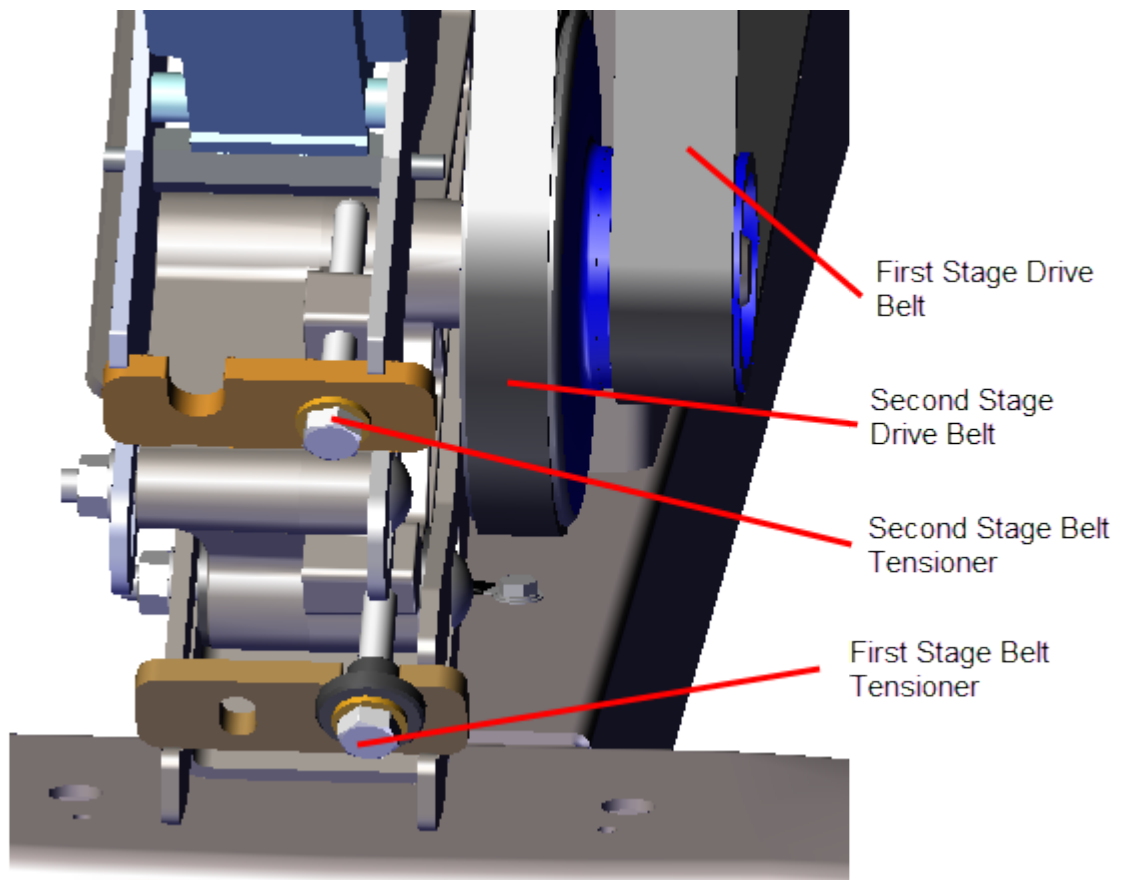
Installation Instructions

1. Install the first stage drive belt by walking the belt onto the Input drive and smaller first stage drive pulleys. Adjust the First Stage Tensioner enough to hold the tensioner and belt in place. Rotate the crank and make sure that the belt is properly aligned and seated in the pulley grooves.

2. Tension the first stage drive belt to 140-150 lbs (63.5 - 68 kgs), see ."First Stage Drive Belt Tension Adjustment" on page 32 .

3. Verify that the second stage drive belt is within the specified tension 110-120 lbs (50-54.4 kgs). If not within specification retention the belt, see "Second Stage Drive Tension Adjustment" on page 36.

4. Tighten the two Drive Components Assembly carriage bolt fasteners, torque to 180 in-lbs (20.3 Nm).

5. Reinstall the right Stairarm, see "Stairarm Replacement" on page 117.

6. Reinstall the right and left drive disk covers, see "Drive Disk Covers Replacement" on page 57.

7. Reinstall the drive access cover, see "Drive Access Cover Replacement" on page 56.

8. Verify machine operation and return to service, see "Operation Verification" on page 11.

Second Stage Drive Belt Replacement

About

This procedure provides instruction to remove and install the Second Stage Drive Belt.
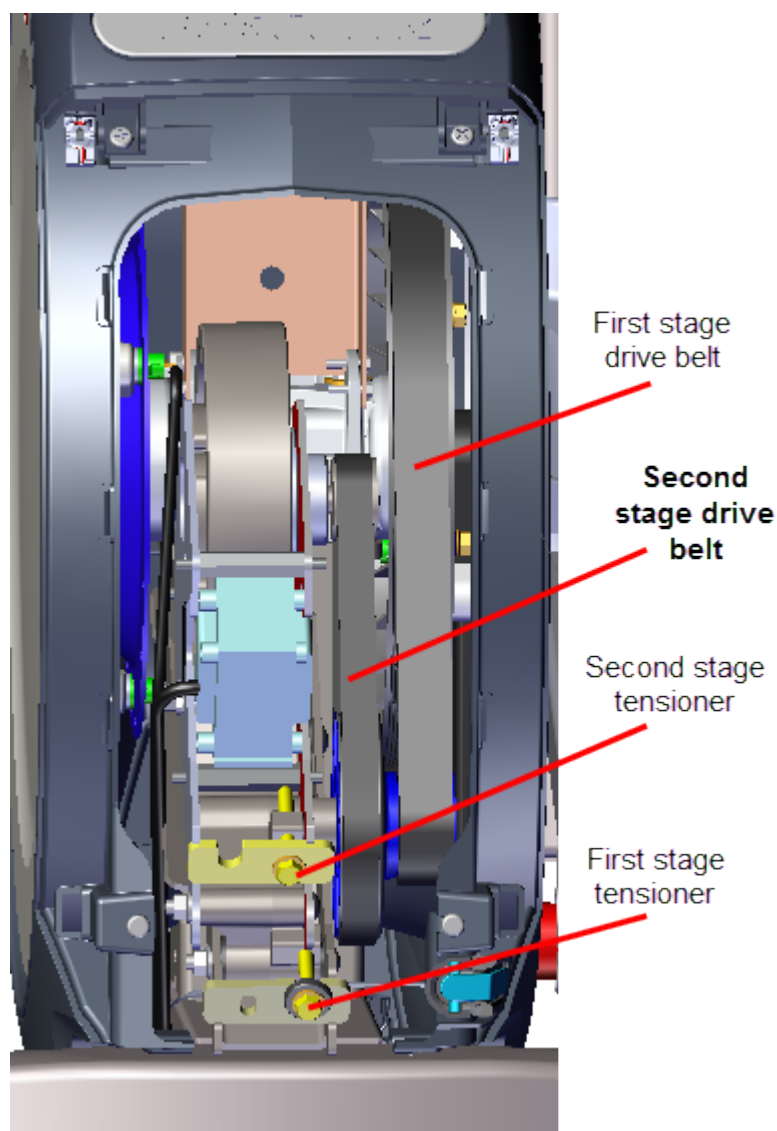

Specifications

| System Component	Specification
Second Stage Belt Drive Tension	110-120 lbs (50- 54.4 kgs)
Second Stage Belt Drive Tension - Used	92 - 105 lbs (43 - 47.6 kgs)
Drive Component Assy Carriage Bolts	180 in-lbs (20.3 Nm)

Procedure

Review entire procedure before starting.
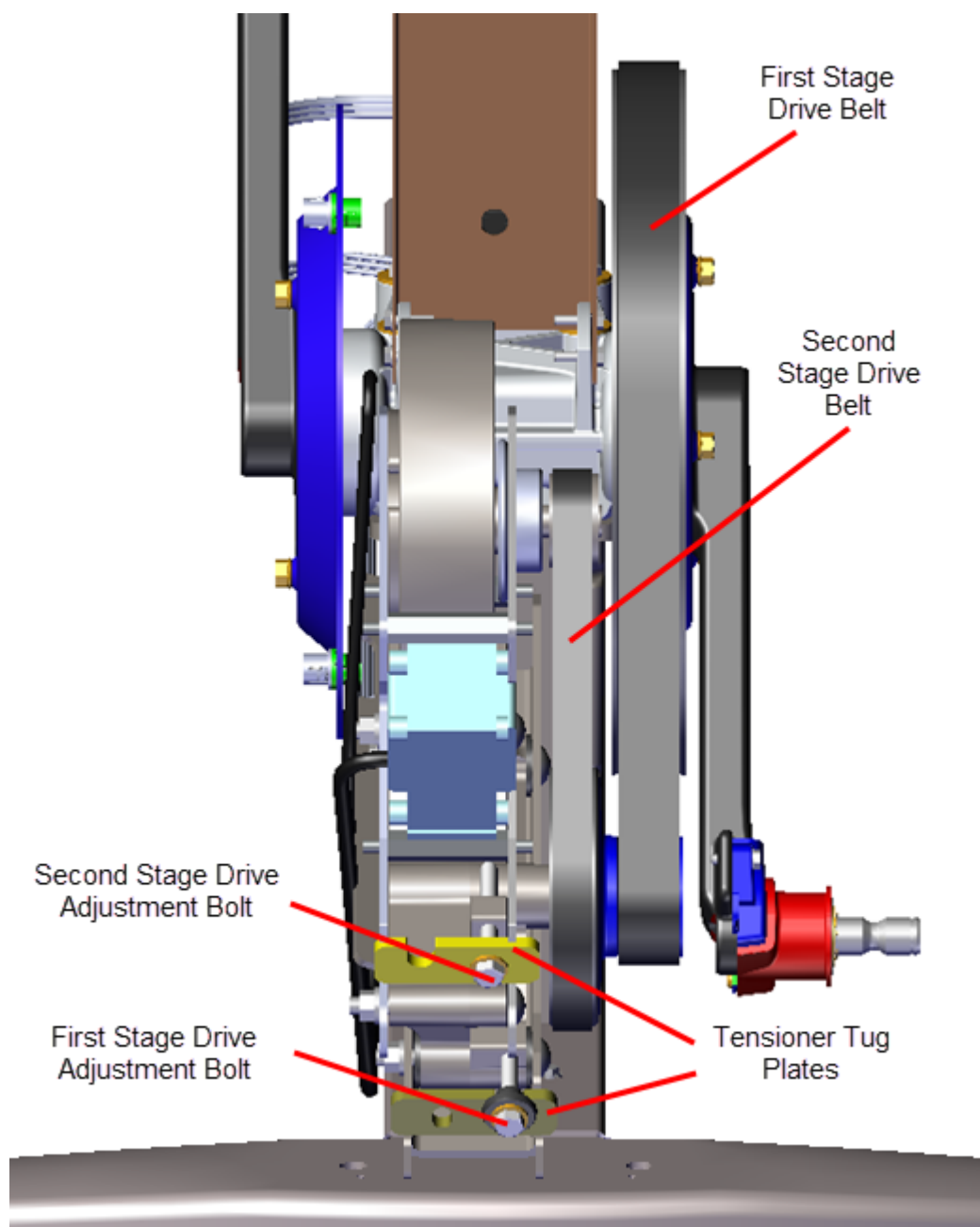
Removal Instructions

1. Remove the drive access cover, see "Drive Access Cover Replacement" on page 56.

2. Remove the right and left drive disk covers, see "Drive Disk Covers Replacement" on page 57.

3. Remove the right Stairarm, see "Stairarm Replacement" on page 117.

4. Use a 1/2" socket to loosen the two Generator and Eddy Brake Assembly and the two Drive Components Assembly fastener nuts (left side). Loosen nuts enough to allow movement but keep the carriage bolt heads inserted into the adjustment slots. Do not remove the fastener nuts.
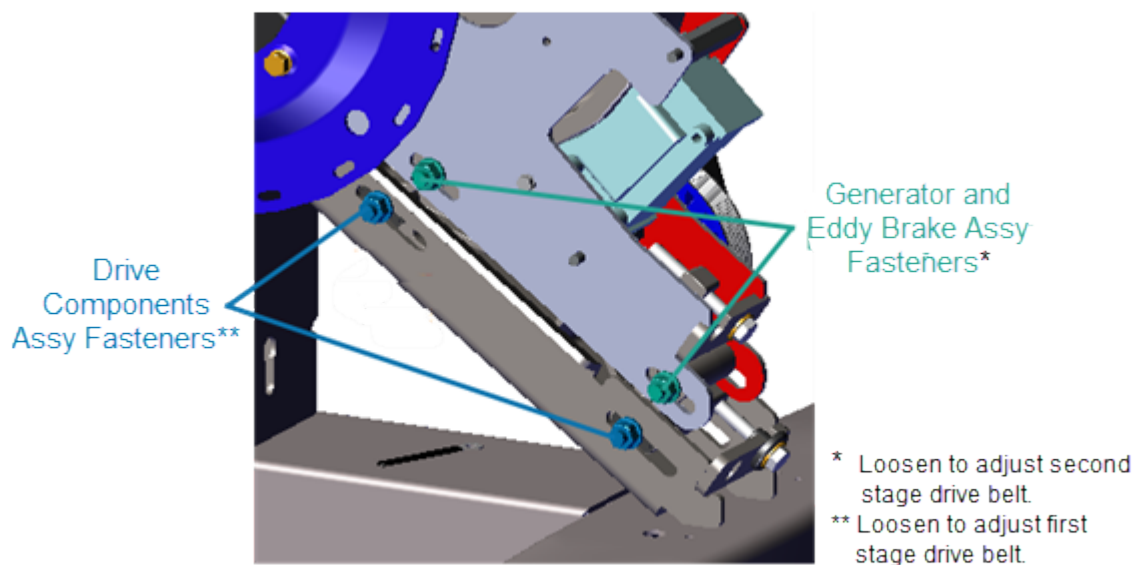
Drive Components Assy Fasteners**

Generator and Eddy Brake Assy Fasteners*

* Loosen to adjust second stage drive belt.
** Loosen to adjust first stage drive belt.

5. Use a 1/2" socket to loosen first stage belt tension and walk the first stage drive belt off the pulleys. Remove the first stage drive belt.

First Stage Drive Belt

Second Stage Drive Belt

Second Stage Belt Tensioner

First Stage Belt Tensioner
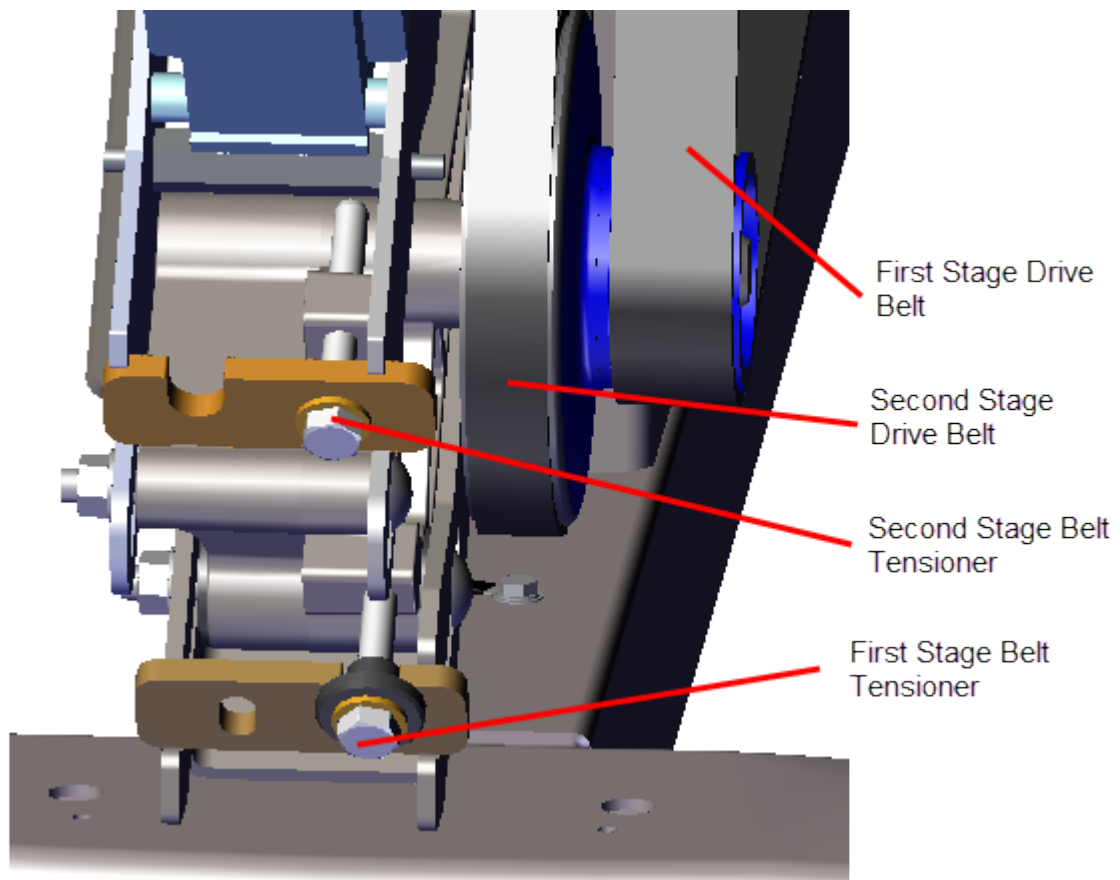
6. Use a 1/2" socket to loosen second stage belt tension and walk the second stage drive belt off the pulleys. Remove the second stage drive belt.

Installation Instructions

1. Install the second stage drive belt by walking the belt onto the Drive Components Assembly second stage pulleys. Rotate the crank and make sure that the belt is properly aligned and seated on both pulley grooves. Adjust the second stage tensioner enough to hold the tensioner and belt in place.

2. Install the first stage drive belt by walking the belt onto the input drive and first stage drive pulleys. Rotate the crank and make sure that the belt is properly aligned and seated in the pulley grooves. Adjust the first stage tensioner enough to hold the tensioner and belt in place.

First Stage Drive Belt

Second Stage Drive Belt

Second Stage Drive Adjustment Bolt

First Stage Drive Adjustment Bolt

Tensioner Tug Plates
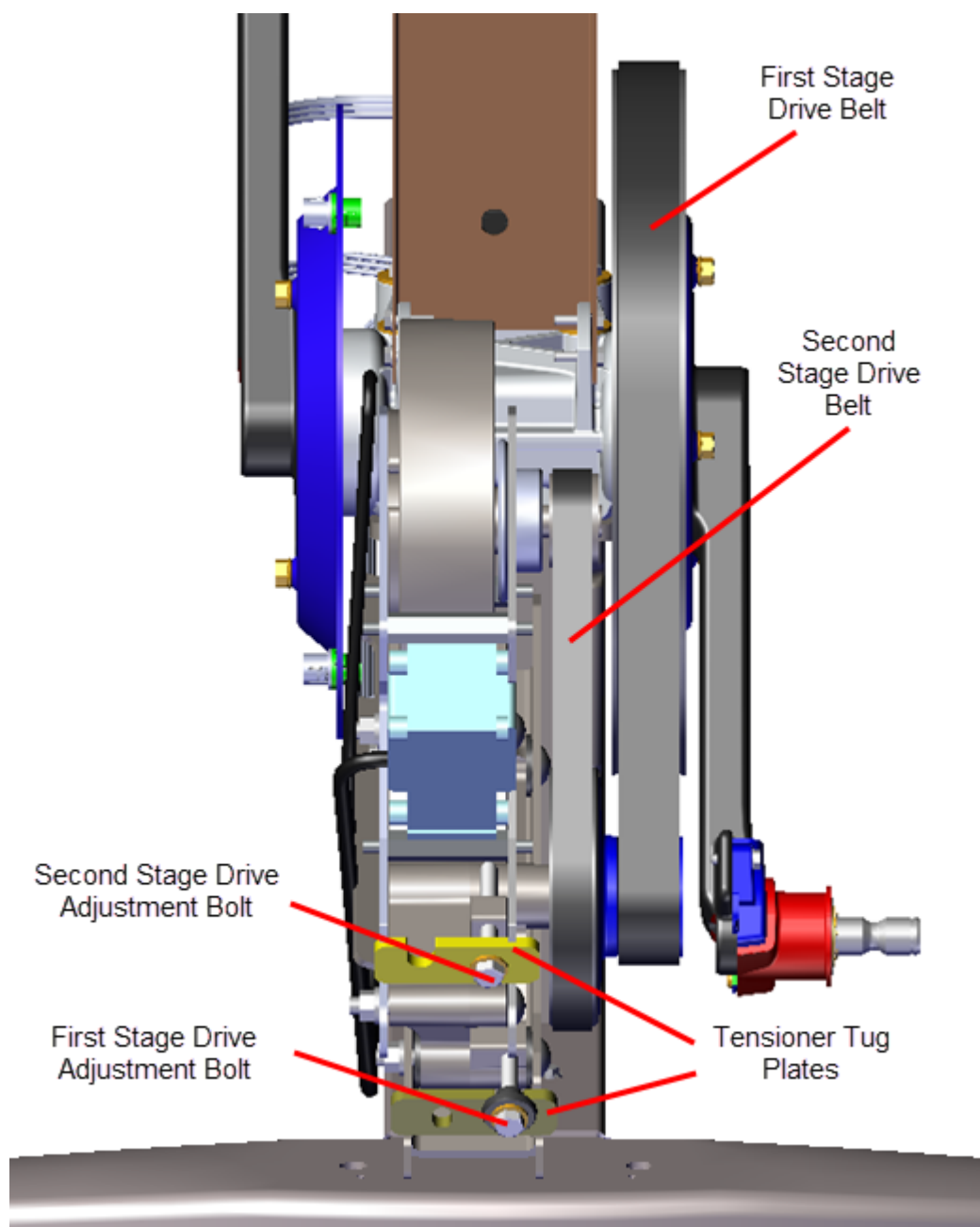
3. Adjust the first stage drive belt tension to [[[Undefined variable EFX800-16Base.spec-BeltTensionFirstStage-12]]], see ."First Stage Drive Belt Tension Adjustment" on page 32 .

4. Adjust the second stage drive belt tension to [[[Undefined variable EFX800-16Base.spec-BeltTesnsionSecStage-8]]], see "Second Stage Drive Tension Adjustment" on page 36.

5. Use a 1/2" socket to tighten the two Generator and Eddy Brake Assembly and the two Drive Components Assembly fasteners to [[[Undefined variable EFX800-16Base.spec-Step-upPulleyTensioner]]].

6. Reinstall the right Stairarm, see "Stairarm Replacement" on page 117.

7. Reinstall the right and left drive disk covers, see "Drive Disk Covers Replacement" on page 57.

8. Reinstall the drive access cover, see "Drive Access Cover Replacement" on page 56,

9. Verify machine operation and return to service, see "Operation Verification" on page 11.

Generator and Eddy Brake Assembly Replacement

About

This procedure provides instruction to remove and install the Generator and Eddy Brake assembly.
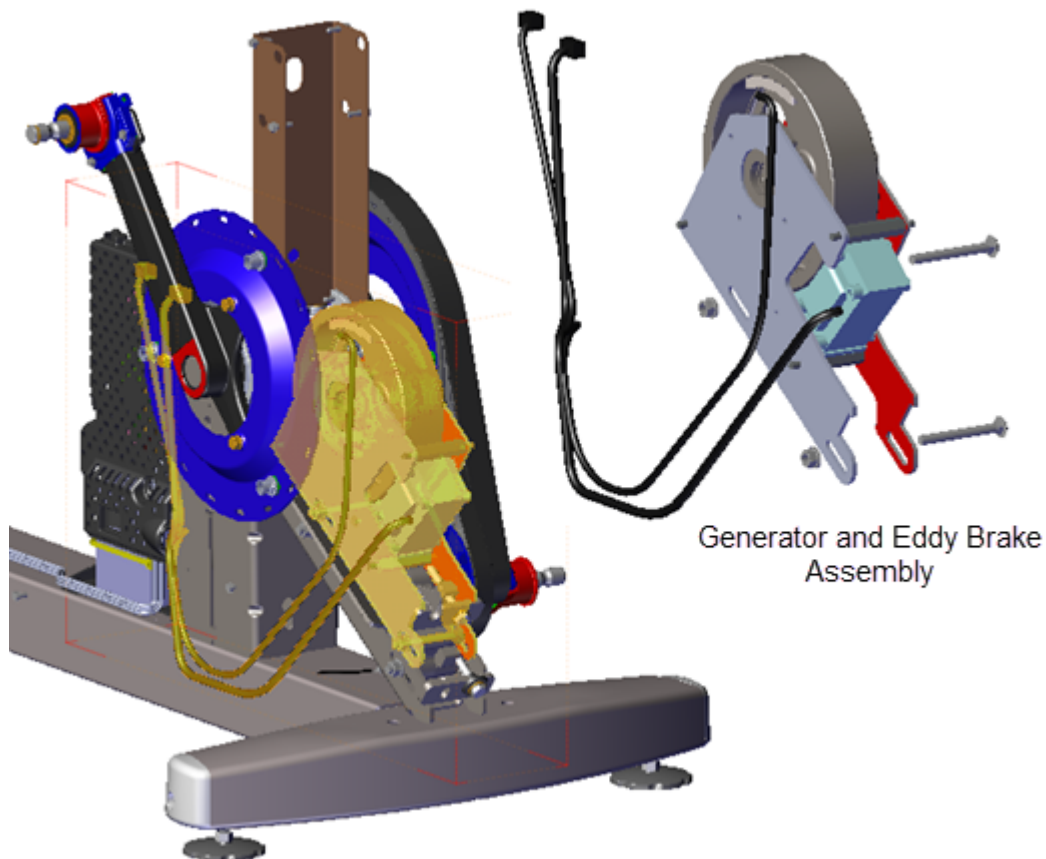

Generator and Eddy Brake Assembly

Procedure

Review entire procedure before starting.

Removal Instructions

1. Remove the Drive Access cover, see "Drive Access Cover Replacement" on page 56.

2. Remove the left and right Drive Disk covers, see "Drive Disk Covers Replacement" on page 57.

3. Remove the one #2 Phillips screw fastener and LPCA[1]/Battery module cover. Disconnect the Generator input cable (J1) and Eddy/Brake load cable (J7) from the LPCA board. Retain fastener hardware for installation.

---

[1]Lower PCA board

LPCA/Battery module Cover

Gen Input (J1)

Eddy/Brake Load (J7)

Battery

4. Use a 1/2" socket to loosen the two Generator and Eddy Brake Assembly and the two Drive Components Assembly fastener nuts (left side). Do not remove the fastener nuts.

Drive Components Assy Fasteners**

Generator and Eddy Brake Assy Fasteners*

* Loosen to adjust second stage drive belt.
** Loosen to adjust first stage drive belt.
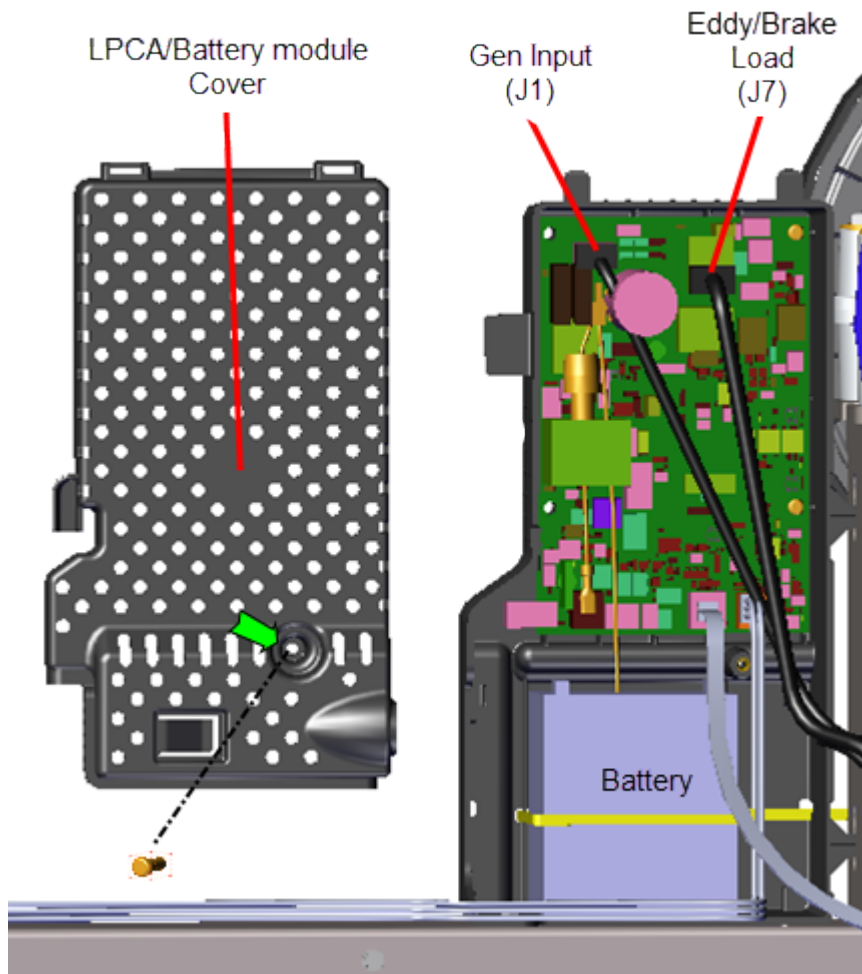
5. Use a 1/2" socket to loosen the first stage belt tensioner and walk the first stage drive belt off the pulleys. Rest the belt on the crankarm, it is not necessary to remove the belt from the unit. Retain belt for installation.

First Stage Drive Belt

Second Stage Drive Belt

Second Stage Belt Tensioner

First Stage Belt Tensioner
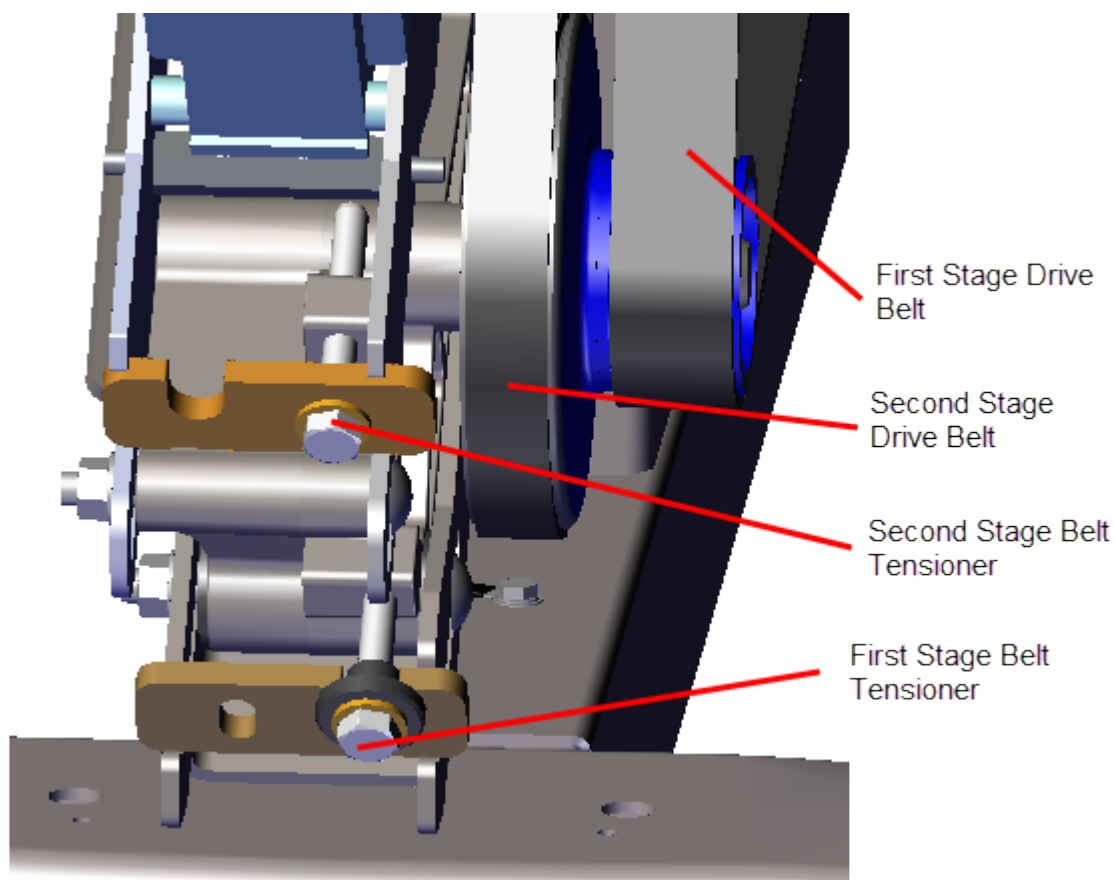
6. Use a 1/2" socket to loosen the second stage belt tensioner and walk the second stage drive belt off the pulleys. Remove the second stage drive belt. Rest the pulley on the crankarm, it is not necessary to remove the belt from the unit. Retain belt for installation.

7. Use a 1/2" socket to remove the Generator and Eddy Brake Assembly lower carriage bolt fastener. Then slide the assembly down and remove the upper carriage bolt. Remove the Generator and Eddy Brake Assembly. Retain fastener hardware for installation.

TIP: Remove the lower carriage bolt fastener first and then the upper. The upper bolt cannot be removed while the lower bolt is installed.
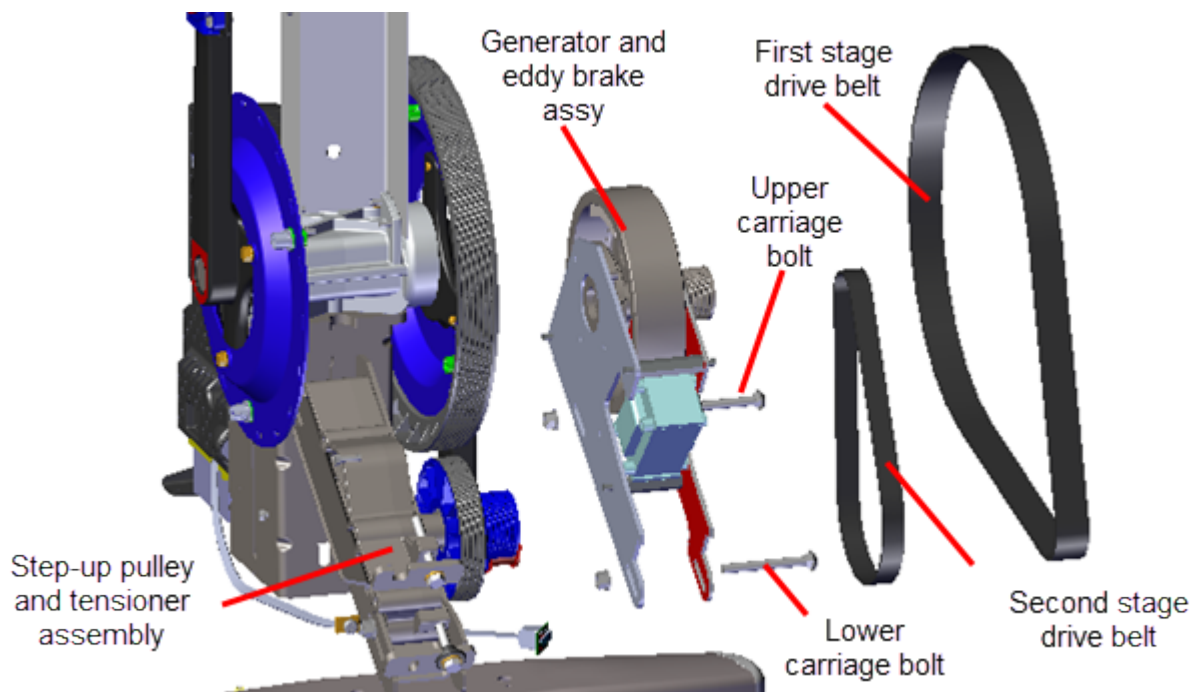
Installation Instructions

1. Reinstall the Generator and Eddy Brake Assembly onto the Step-up Pulley and Tensioner bracket.

2. Slide the assembly down and install the upper carriage bolt. Tighten the bolt enough to keep the carriage bolt heads inserted into the mounting slot but do not fully tighten. Then slide the assembly upward and install the lower carriage bolt. Tighten the bolt enough to keep the carriage bolt heads inserted into the mounting slot but do not fully tighten.

TIP: Install the upper carriage bolt fastener first and then the lower. The upper bolt cannot be installed when the lower bolt is installed.

3. Walk the second stage drive belt onto the second stage pulleys and tension to 110-120 lbs (50- 54.4 kgs), see "Second Stage Drive Tension Adjustment" on page 36.

4. Walk the first stage drive belt onto the first stage pulleys and tension the belt to 140-150 lbs (63.5 - 68 kgs), see "First Stage Drive Belt Tension Adjustment" on page 32.

5. Fully tighten the two Generator and Eddy Brake Assembly and two Drive Components Assembly carriage bolt fasteners, torque to 180 in-lbs (20.3 Nm).

6. Reconnect the Generator input cable (J1) and Eddy/Brake load cable (J7) on the LPCA board. Reinstall the LPCA/Battery module cover and secure with the #2 Phillips screw fastener.

7. Reinstall the left and right Drive Disk covers, see "Drive Disk Covers Replacement" on page 57.

8. Reinstall the Drive Access cover, see "Drive Access Cover Replacement" on page 56.

9. Verify machine operation and return to service, see "Operation Verification" on page 11.

Step-up Pulley and Tensioner Assembly Replacement

About

This procedure provides instruction to remove and install the Step-up Pulley and Tensioner Assembly.

The Step-up pulley and Tensioner Assembly contain the step-up pulleys and the first and second stage drive belt tensioners
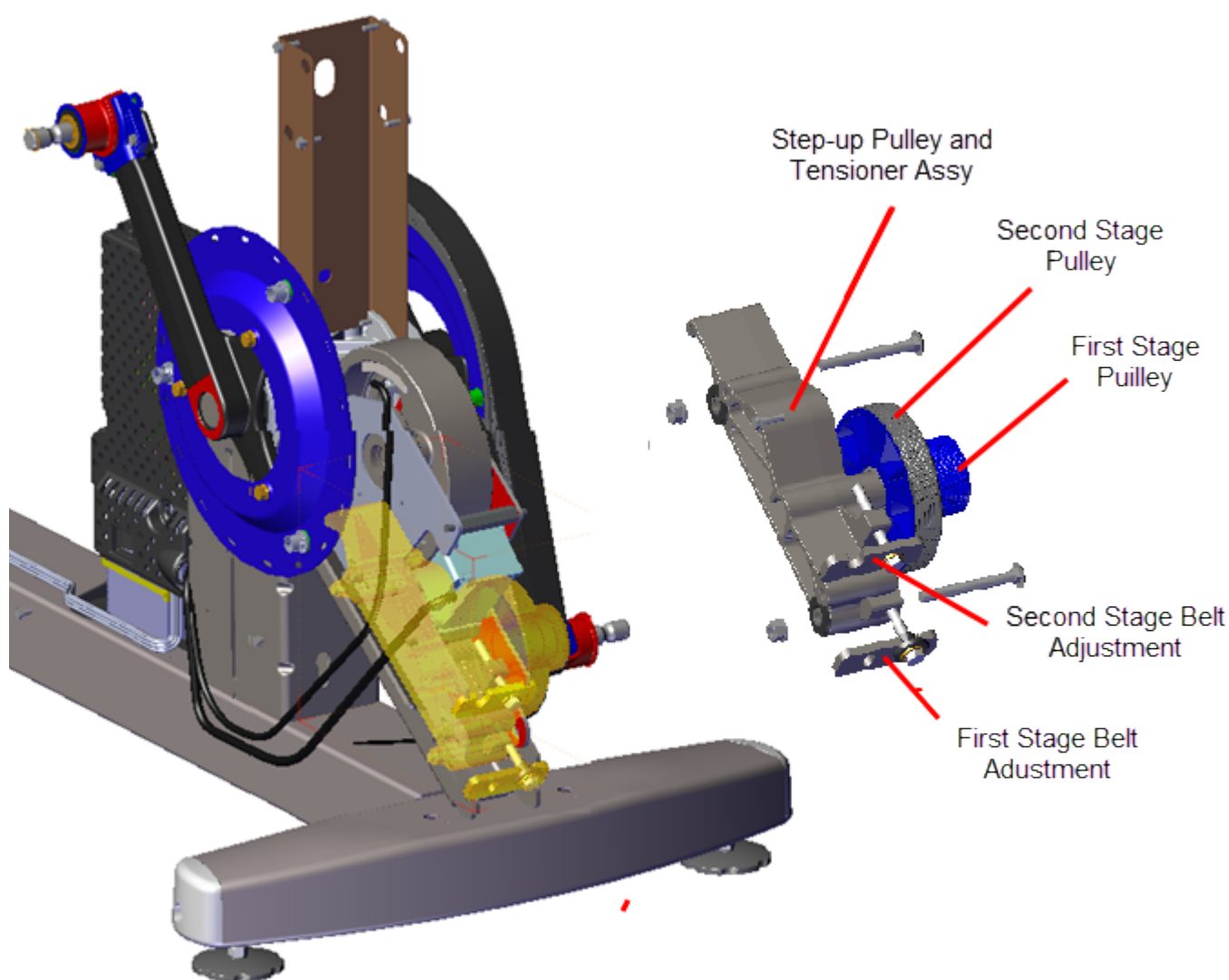
Step-up Pulley and Tensioner Assy

Second Stage Pulley

First Stage Puilley

Second Stage Belt Adjustment

First Stage Belt Adustment

Step-up Pulley and Tensioner Assembly Exploded View

Fasteners (2x)

Isolators (4x)

Spacers (4x)

Second Stage Drive
Belt Tensioner

First Stage Drive
Belt Tensioner
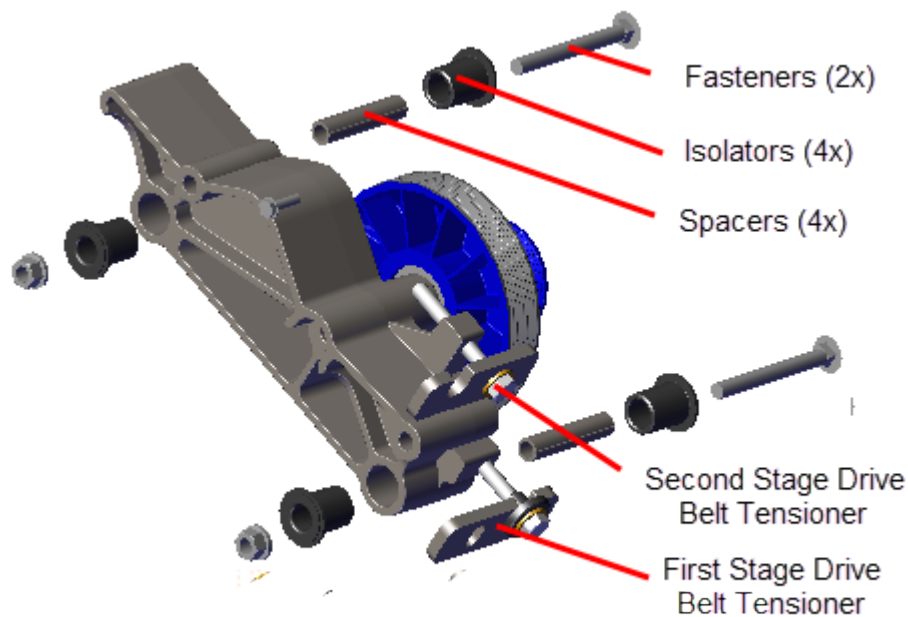
Step-up Pulley and Tensioner Assembly

Procedure

Review entire procedure before starting.

Removal Instructions

1. Remove the Drive Access cover, see "Drive Access Cover Replacement" on page 56.

2. Remove the left and right Drive Disk covers, see "Drive Disk Covers Replacement" on page 57.

3. Remove the left and right Stairarms and the Drive Housing covers, see "Drive Housing Covers Replacement" on page 59.

4. Remove the Drive Components Assembly, see "Drive Components Assembly Replacement" on page 86.

TIP: The Step-up Pulley and Tensioner mounting hardware (spacers and isolators) can easily fall out of the mounting holes. Take care to keep track of these components for installation, see "Step-up Pulley and Tensioner Assembly Exploded View" above.

Drive Components Assembly

Generator and Eddy Brake Assembly

Second Stage Drive Belt

Step-up Pulley and Tensioner Assembly

Second Stage Drive Belt Tensioner

First Stage Drive Belt Tensioner

2. Use a 1/2" socket to loosen the second stage belt tension and walk the second stage drive belt off the pulleys. Remove the second stage drive belt.

3. Use a 1/2" socket to remove the two carriage bolt fasteners to separate the Generator and Eddy Brake Assembly from the Step-up Pulley and Tensioner Assembly.

Installation Instructions

1. Reassemble the Drive Components Assemblyy. Place the Generator and Eddy Brake Assembly onto the Step-up Pulley and Tensioner Assembl mounting bracket. Install the two carriage bolt fasteners. Tighten the bolts enough to keep the carriage bolt heads inserted into the mounting and belt adjustment slots, but do not fully tighten.

2. Adjust the second stage tensioner to walk the second stage drive belt onto the pulleys. Tighten the second stage tensioner bolts enough to keep the belt on the pulleys and tensioner hardware in place. Do not over tension the belt.

3. Reinstall the Drive Components Assembly, see "Drive Components Assembly Replacement" on page 86.

4. Reinstall the left and right Stairarms and Drive Housing covers, see "Drive Housing Covers Replacement" on page 59.

5. Reinstall the left and right Drive Disk covers, see "Drive Disk Covers Replacement" on page 57.

6. Reinstall the Drive Access cover, see "Drive Access Cover Replacement" on page 56.

7. Verify machine operation and return to service, see "Operation Verification" on page 11.

.See Also

Drive Components Assembly Replacement

About

This procedure provides instruction to remove and install the Drive Components Assembly.

The Drive Components assembly consists of the Step-up Pulley and Tensioner assembly and Generator and Eddy Brake assembly.
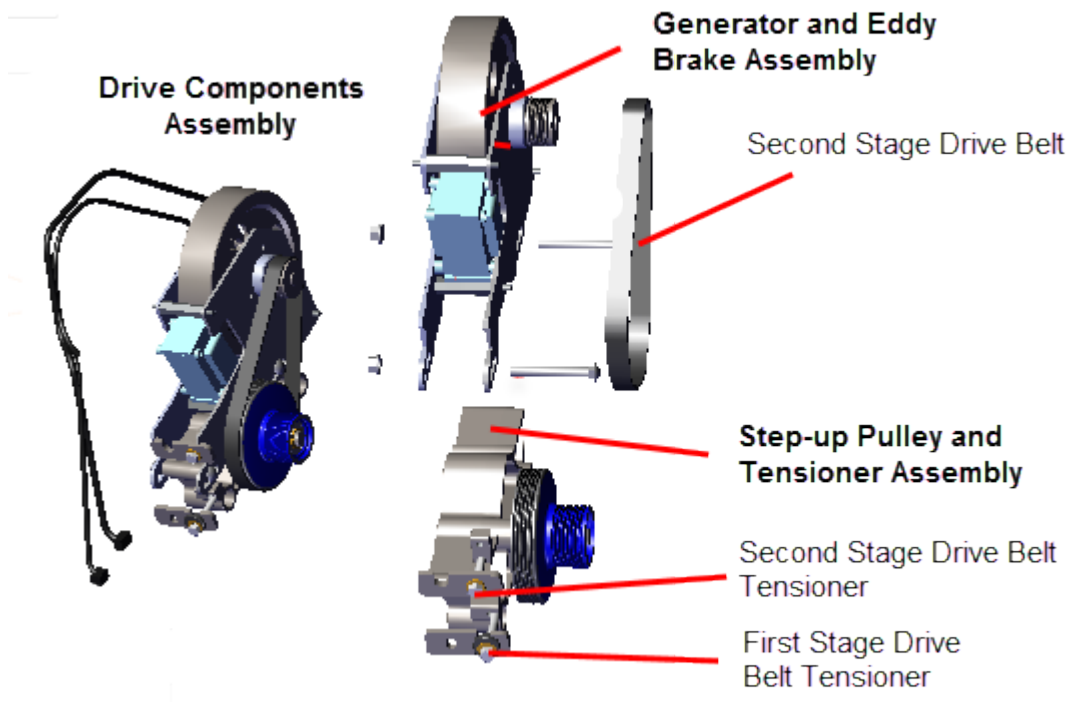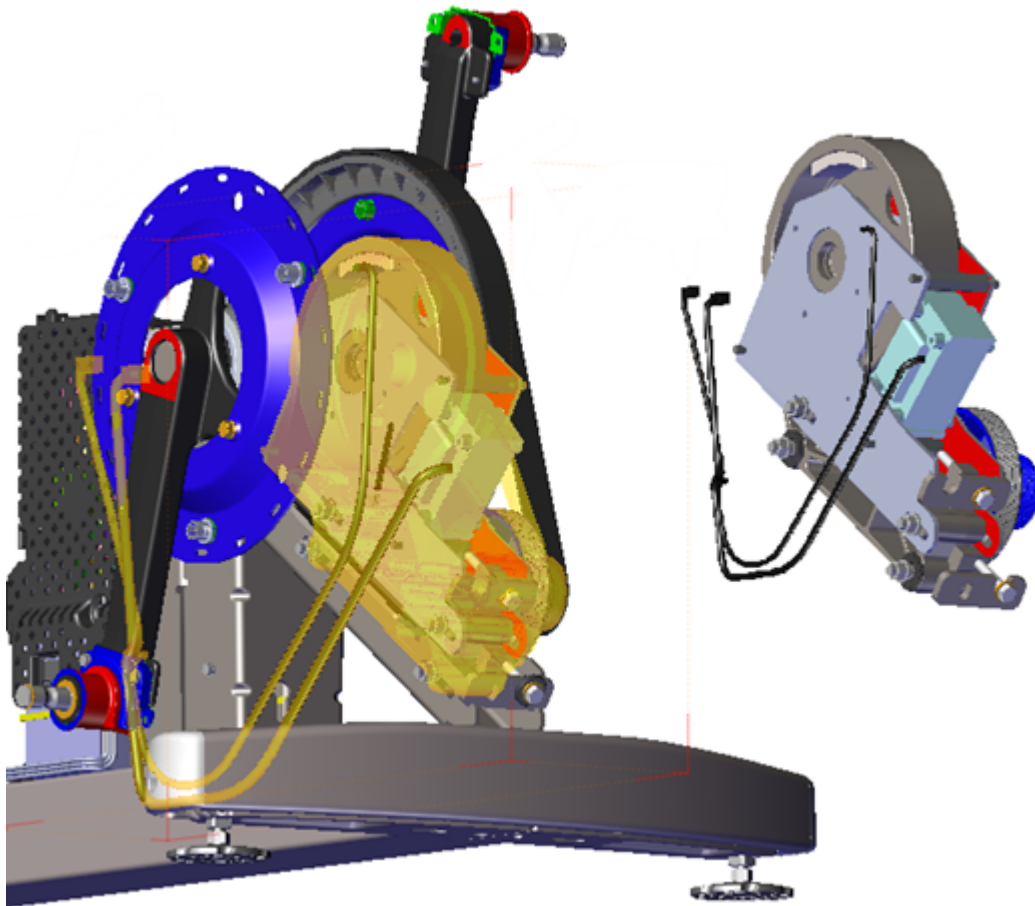

Procedure

Review entire procedure before starting.

Removal Instructions

1. Remove the Drive Access cover, see "Drive Access Cover Replacement" on page 56.
2. Remove the left and right Drive Disk covers, see "Drive Disk Covers Replacement" on page 57.
3. Remove the Stairarms and Drive Housing covers, see "Drive Housing Covers Replacement" on page 59.

4. Remove the one #2 Phillips screw fastener and **LPCA**[1]/Battery module cover. Disconnect the Generator input cable (J1) and Eddy/Brake load cable (J7) from the LPCA board. Retain fastener hardware for installation.
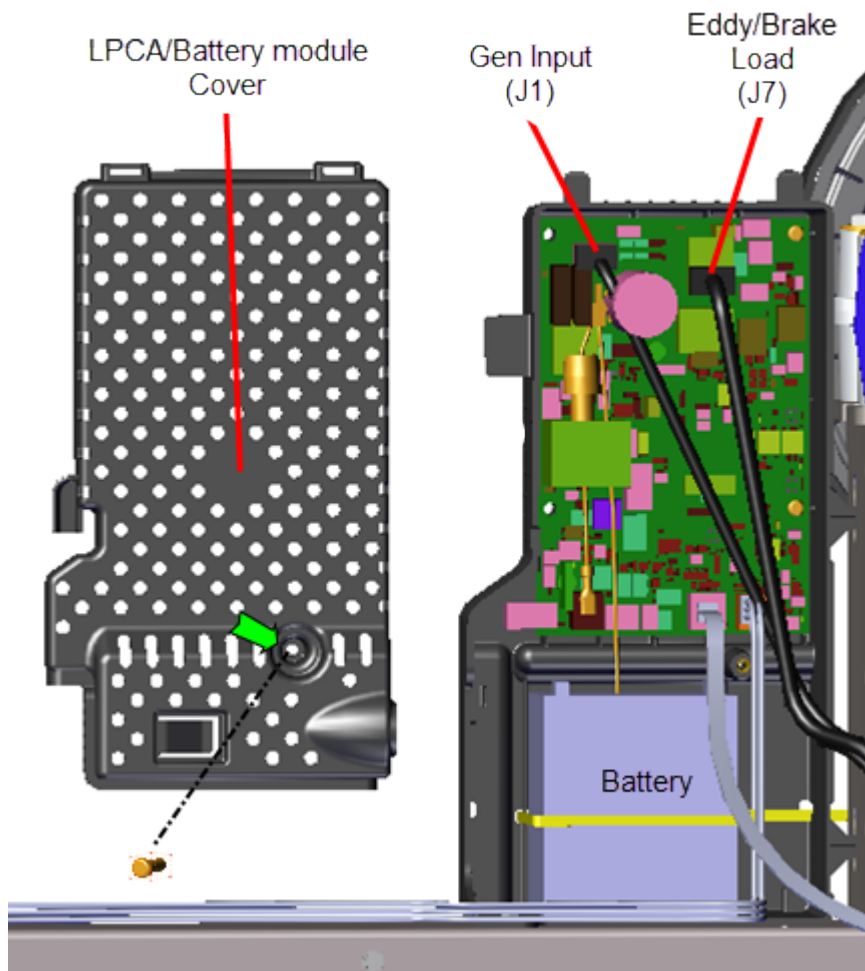
5. Use a 1/2" socket to loosen the two Generator and Eddy Brake Assembly and the two Drive Components Assembly fastener nuts (left side). Do not remove the fastener nuts.

[1]Lower PCA board

Drive Components Assy Fasteners**

Generator and Eddy Brake Assy Fasteners*

* Loosen to adjust second stage drive belt.
** Loosen to adjust first stage drive belt.
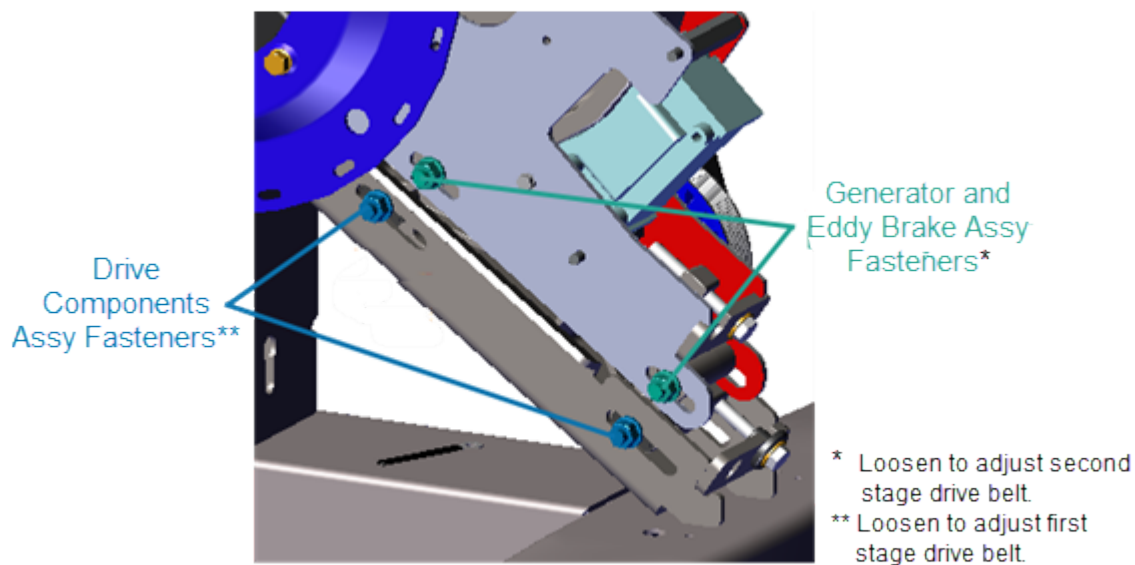
6. Remove the second stage drive belt tension using a 1/2" socket to loosen the second stage belt tensioner bolt.

First Stage Drive Belt

Second Stage Drive Belt

Second Stage Belt Tensioner

First Stage Belt Tensioner
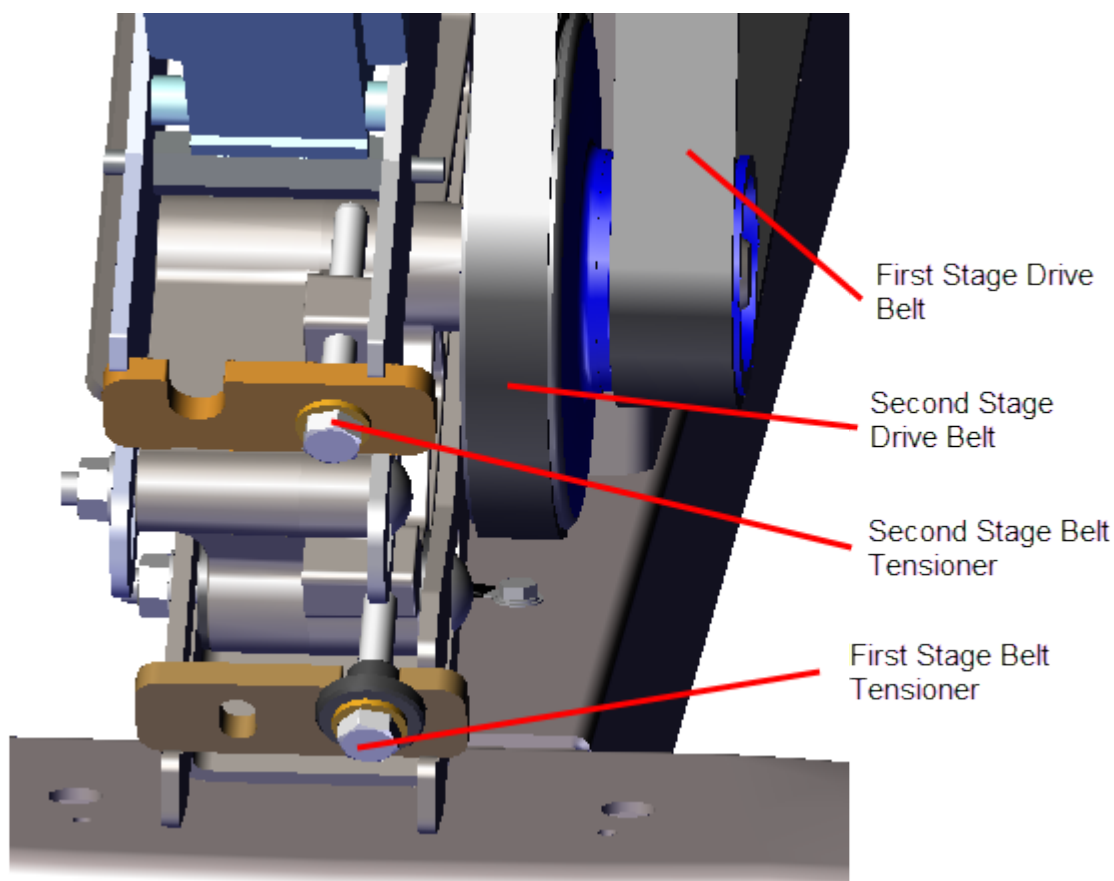
7. Use a 1/2" socket to loosen the first stage belt tensioner and walk the first stage drive belt off the pulleys. Retain belt for installation.

8. Use a 1/2" socket to remove the first stage tensioner hardware (adjustment bolt, washer, isolator bushing, and tensioner tug plate). Retain fastener hardware for installation.
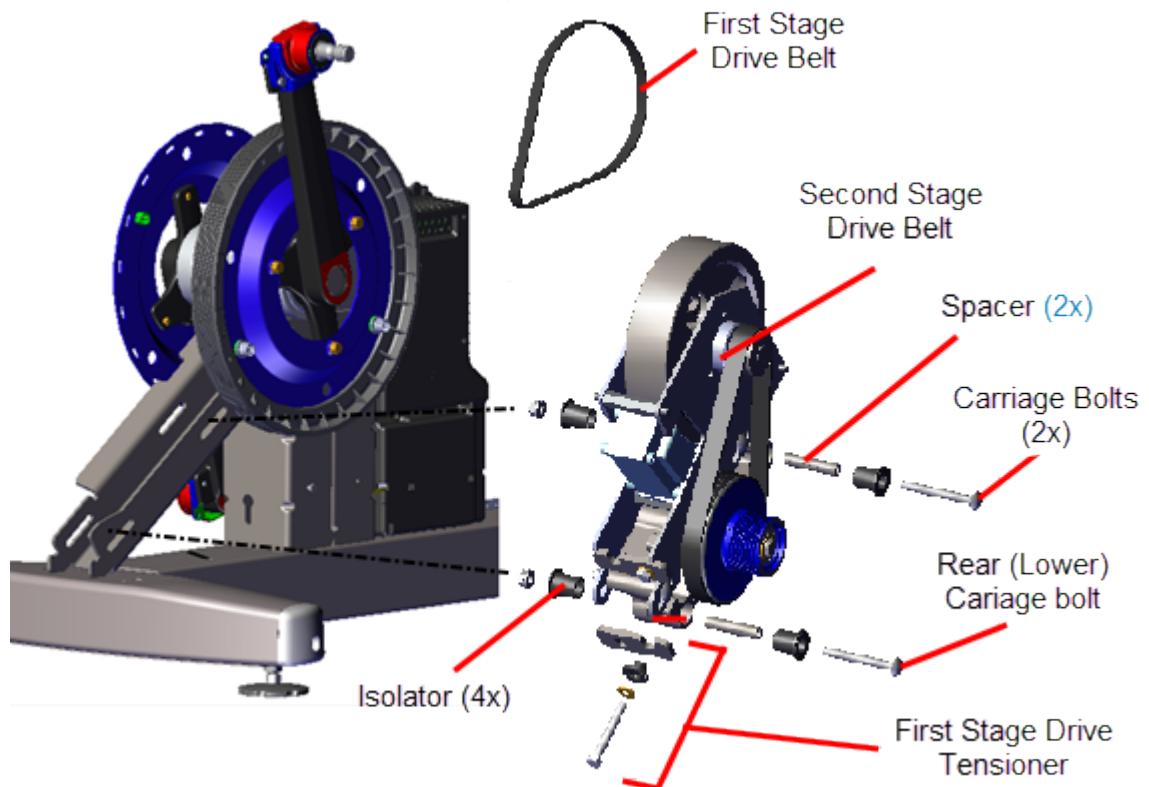
9. Use a 1/2" socket to remove the two Drive Components Assembly carriage bolt fasteners. Remove the rear (lower) bolt first and then slide the Drive Components Assembly downward to create room to remove the forward (upper) bolt. Remove the Drive Components Assembly. Retain fastener hardware for installation.

(i) **TIP**: The Step-up Pulley and Tensioner mounting hardware (spacers and isolators) can easily fall out of the mounting holes. Take care to keep track of these components for installation, see .

Installation Instructions

1. Prepare the Drive Components Assembly for installation:

    a. If the Drive Components Assembly is disassembled, install the Generator and Eddy Brake Assembly onto the Step-up Pulley and Tensioner Assembly using the two Carriage bolt fasteners.

    b. Tighten the carriage bolts enough to keep the carriage bolt heads inserted into the mounting slot but do not fully tighten.

c. Walk the second stage drive belt onto the second stage pulleys. Tighten the tensioner enough to hold the tensioner hardware and belt in position. The belt will be properly tensioned after the Drive Components Assembly is installed.

2. Reinstall the Drive Components Assembly onto the drive weldment mounting bracket. Make sure that the Step-up Pulley and Tensioner Assembly mounting hardware is correctly installed, see the exploded view above. Install the upper (forward) carriage bolt first and then the lower (rear) carriage bolt. Tighten the bolts enough to keep the carriage bolt heads inserted into the mounting slot but do not fully tighten.
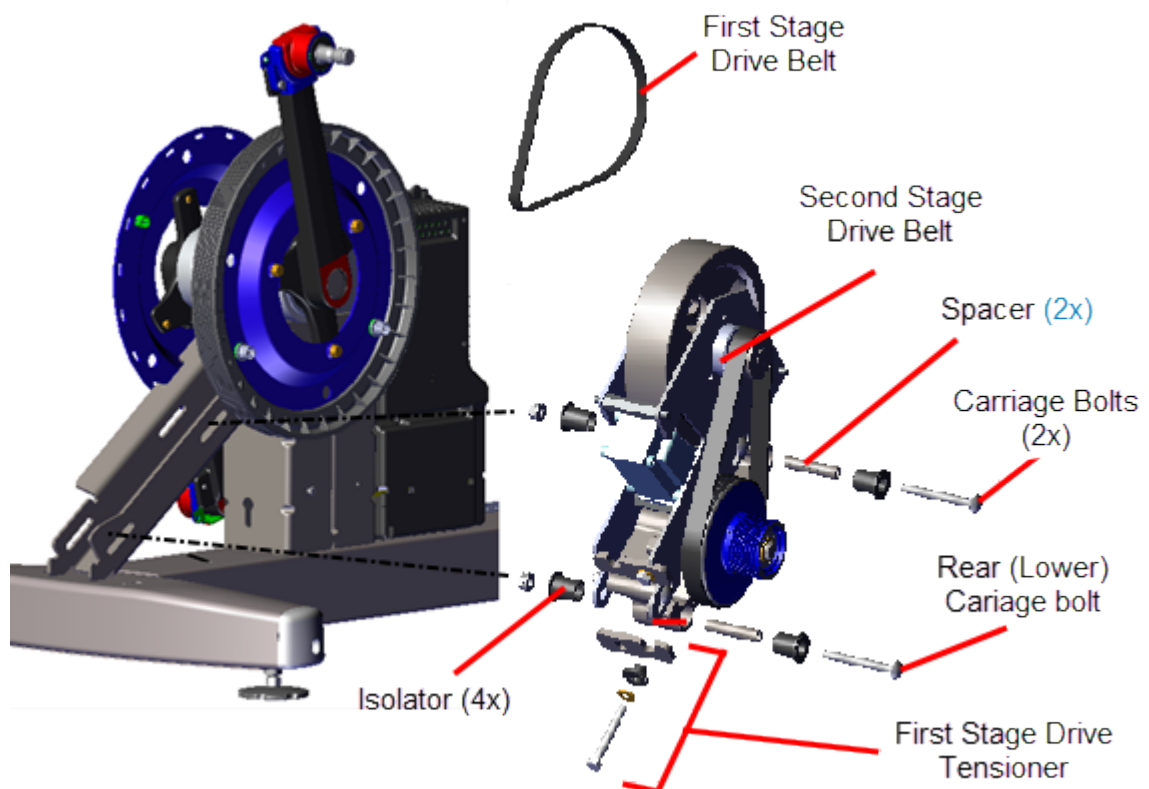
3. Install the first stage tensioner hardware (adjustment bolt, washer, isolator bushing, and tensioner tug plate). Tighten the tensioner bolt enough to hold the hardware in place.

4. Adjust the tensioner as necessary to walk the first stage drive belt onto the first stage pulleys. Rotate the crank and make sure that both the first and second stage drive belts are properly aligned and seated in the pulley grooves. Tighten both tensioner adjustment bolts enough to hold the tensioner hardware and belts in position.
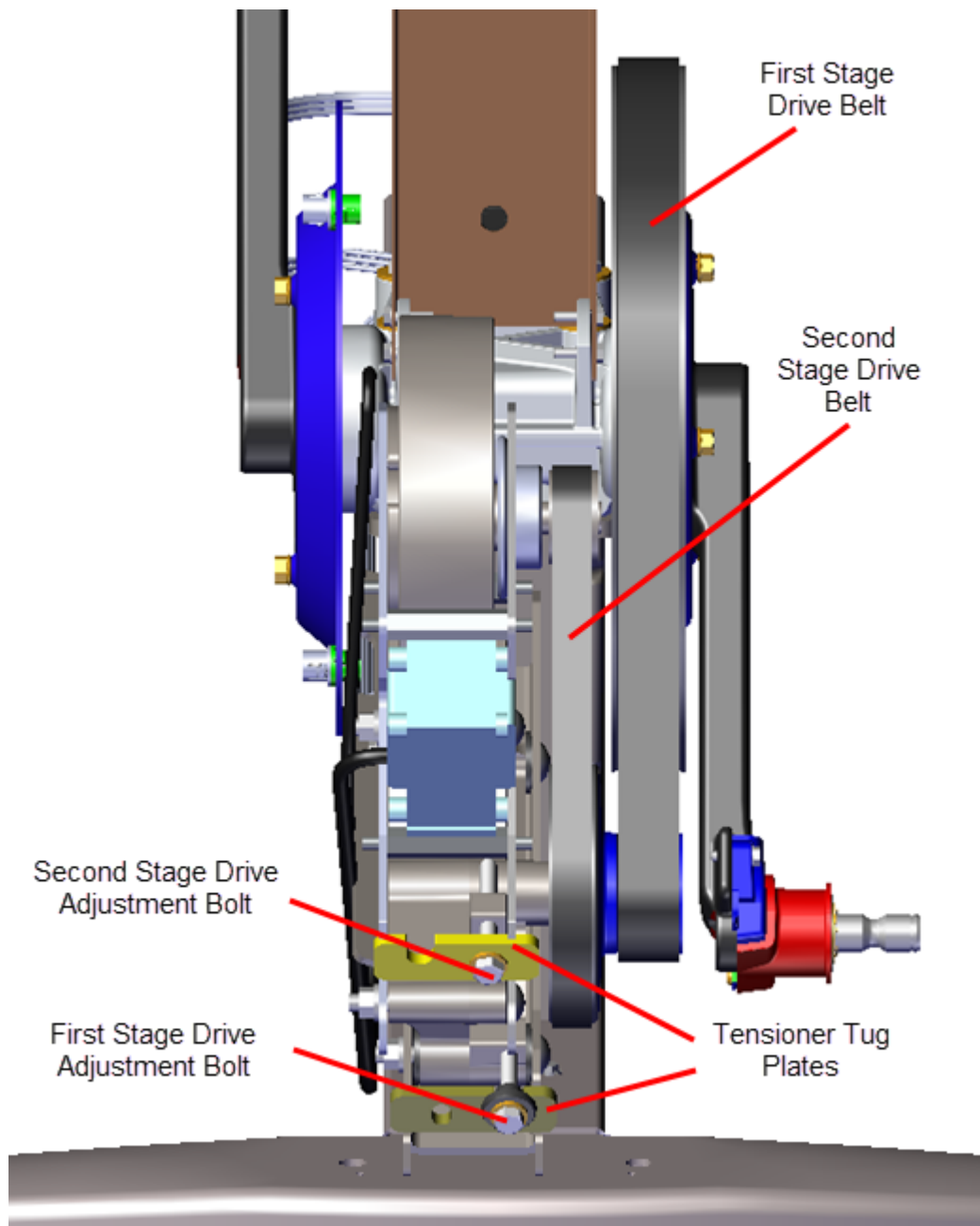
5. Tension the first stage drive belt to 140-150 lbs (63.5 - 68 kgs), see "First Stage Drive Belt Tension Adjustment" on page 32.

6. Tension the second stage drive belt to 110-120 lbs (50- 54.4 kgs), see "Second Stage Drive Tension Adjustment" on page 36.

7. Tighten the two Generator and Eddy Brake Assembly and two Drive Components Assembly carriage bolt fasteners, torque to 180 in-lbs (20.3 Nm).

8. Reconnect the Generator input cable (J1) and Eddy/Brake load cable (J7) on the LPCA board. Reinstall the LPCA/Battery module cover and secure with the #2 Phillips screw fastener.

9. Reinstall the left and right Stairarms and Drive Housing covers, see "Drive Housing Covers Replacement" on page 59.

10. Reinstall the left and right Drive Disk covers, see "Drive Disk Covers Replacement" on page 57.

11. Reinstall the Drive Access cover, see "Drive Access Cover Replacement" on page 56.

12. Verify machine operation and return to service, see "Operation Verification" on page 11.

See Also

"Second Stage Drive Tension Adjustment" on page 36

"First Stage Drive Belt Tension Adjustment" on page 32

Cranks and Input Bearing Assembly Replacement

About

This procedure provides instruction to remove and install the Cranks and Input Bearing Assembly.
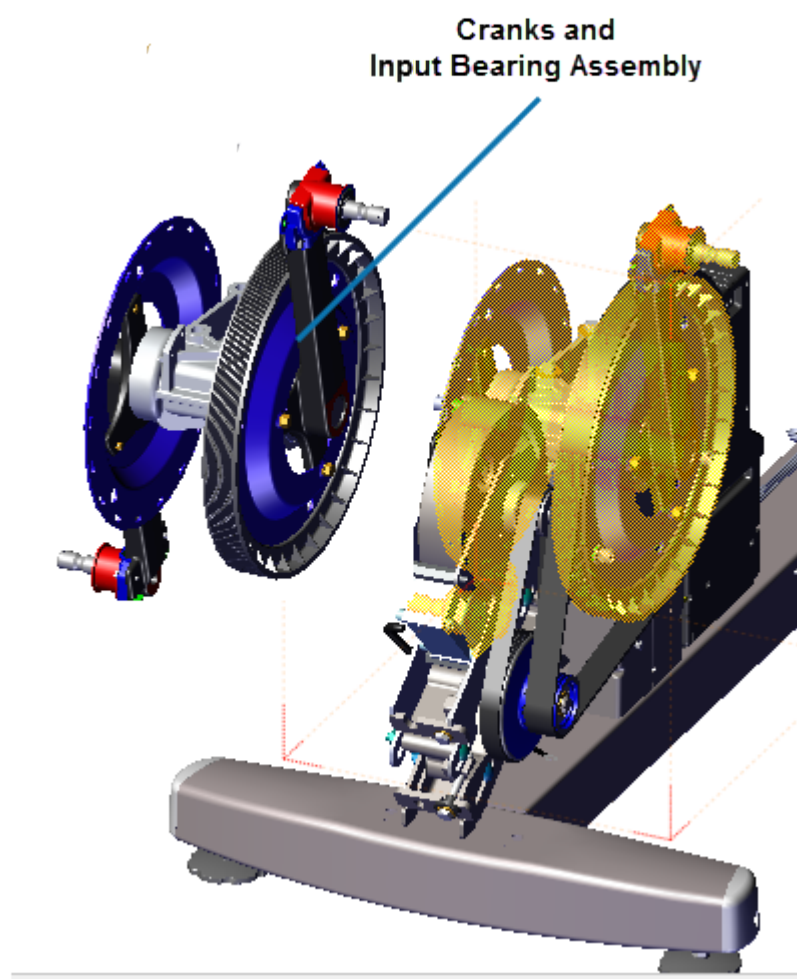
Specifications

System Component	Specification
Cranks and Input Bearing Assy Fasteners	300 +/- 90 in-lbs (34 +/- 10 Nm)

Procedure

Review entire procedure before starting.

Removal Instructions

1. Remove the Drive Access cover see "Drive Access Cover Replacement" on page 56.

2. Remove the left and right drive disk covers, see "Drive Disk Covers Replacement" on page 57.

3. Remove the left and right Stairarms and Drive Housing covers see "Drive Housing Covers Replacement" on page 59.

4. Use a 1/2" socket to loosen the two Drive Components Assembly fastener nuts (left side). Do not remove the fastener nuts.

Drive Components Assy Fasteners**

Generator and Eddy Brake Assy Fasteners*

* Loosen to adjust second stage drive belt.
** Loosen to adjust first stage drive belt.
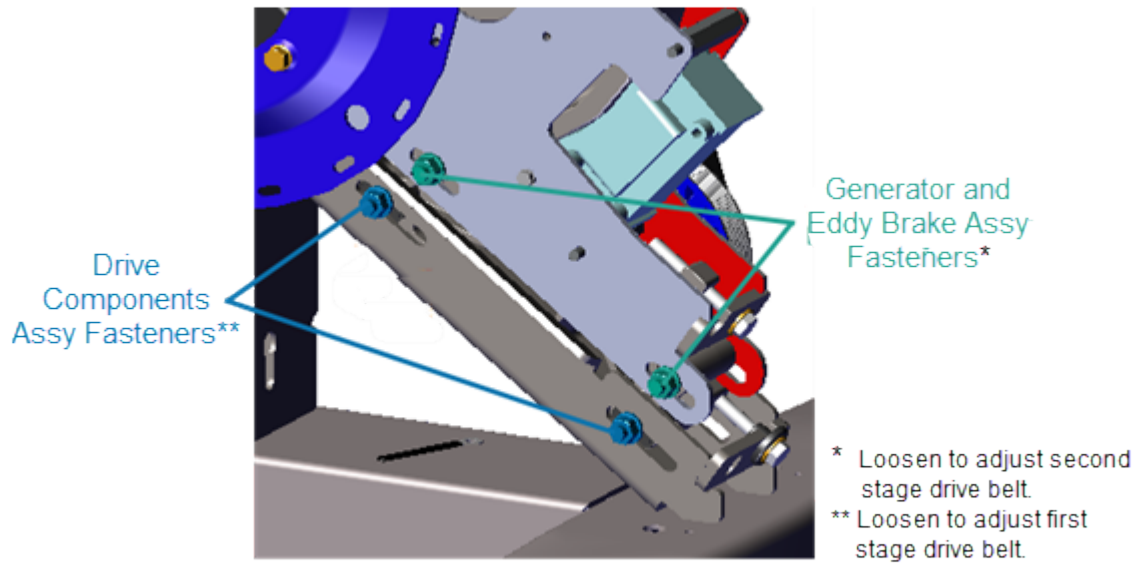
5. Use a 1/2" socket to loosen first stage belt tensioner and walk the first stage drive belt off the pulleys. Remove the first stage drive belt. Retain belt for installation.

First Stage
Drive Belt

Second
Stage Drive
Belt

Second Stage Drive
Adjustment Bolt

First Stage Drive
Adjustment Bolt

Tensioner Tug
Plates

6. Use a 9/16" socket to remove the four fasteners (bolts and washers) and remove the Cranks and Input Bearing Assembly. Discard the four bolt fasteners, the bolt cannot be reused for installation. Retain washers for installation.

⚠️ **CAUTION**: Do not reuse the Crank and Input Bearing Assy Nylok patch bolt fasteners for installation. Discard the bolts and order new bolts for installation.

Cranks and Input Bearing Assy

Input Module Bracket

First Stage Drive Belt
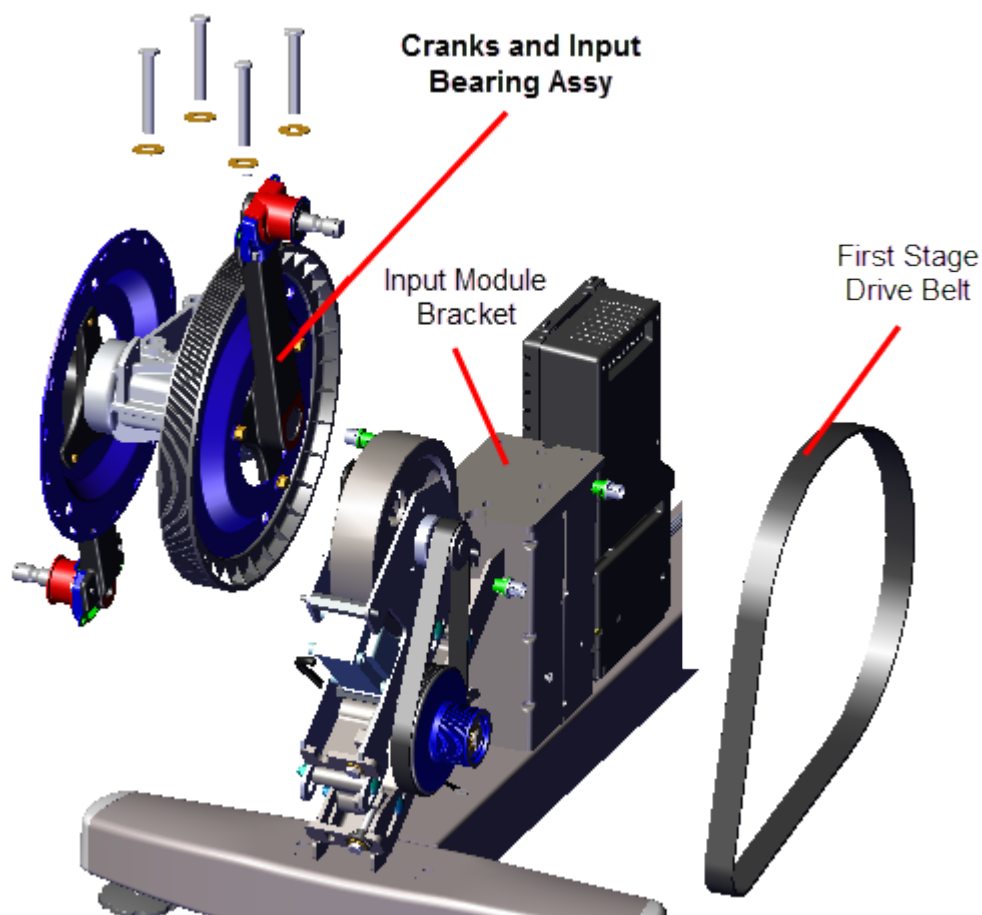
Installation Instructions

1. Reinstall the Cranks and Input Bearing Assembly onto the Input Module Bracket and secure using four new Nylok patch bolt fasteners. The removed washers can be reused for installation. Torque to 300 +/- 90 in-lbs (34 +/- 10 Nm).

⚠️ **CAUTION**: Do not reuse the Crank and Input Bearing Assy Nylok patch bolt fasteners for installation. Discard the bolts and order new bolts for installation.

1. Adjust the first stage tensioner as necessary to walk the first stage drive belt onto the Input drive and smaller first stage drive pulleys. Rotate the crank and make sure that the belt is properly aligned and seated in the pulley grooves.

First Stage
Drive Belt

Second
Stage Drive
Belt

Second Stage Drive
Adjustment Bolt

First Stage Drive
Adjustment Bolt

Tensioner Tug
Plates
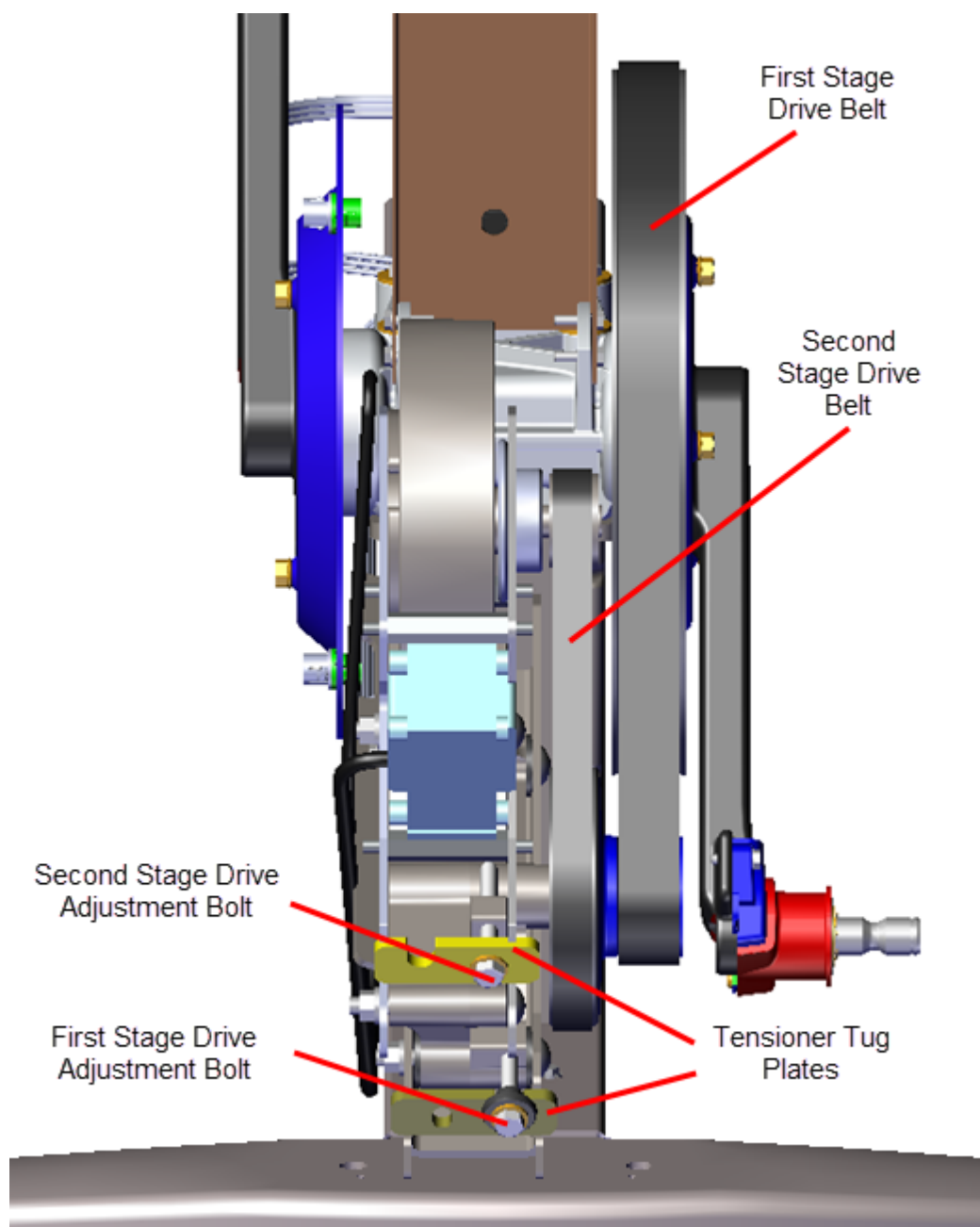
2. Tension the first stage drive belt to 140-150 lbs (63.5 - 68 kgs), see ."First Stage Drive Belt Tension Adjustment" on page 32.

3. Verify the second stage drive belt is within the specified tension 110-120 lbs (50- 54.4 kgs), see "Second Stage Drive Tension Adjustment" on page 36.

4. Tighten the two Drive Components Assembly carriage bolt fasteners, torque to 180 in-lbs (20.3 Nm).

5. Reinstall the right and left Stairarm and Drive Housing covers, see "Drive Housing Covers Replacement" on page 59.

6. Reinstall the left and right Drive Disk covers, "Drive Disk Covers Replacement" on page 57.

7. Reinstall the Drive Access cover, "Drive Access Cover Replacement" on page 56.

8. Verify machine operation and return to service, see "Operation Verification" on page 11.

Lift Motor Replacement

About

This procedure provides instruction to remove and install the Lift Motor.
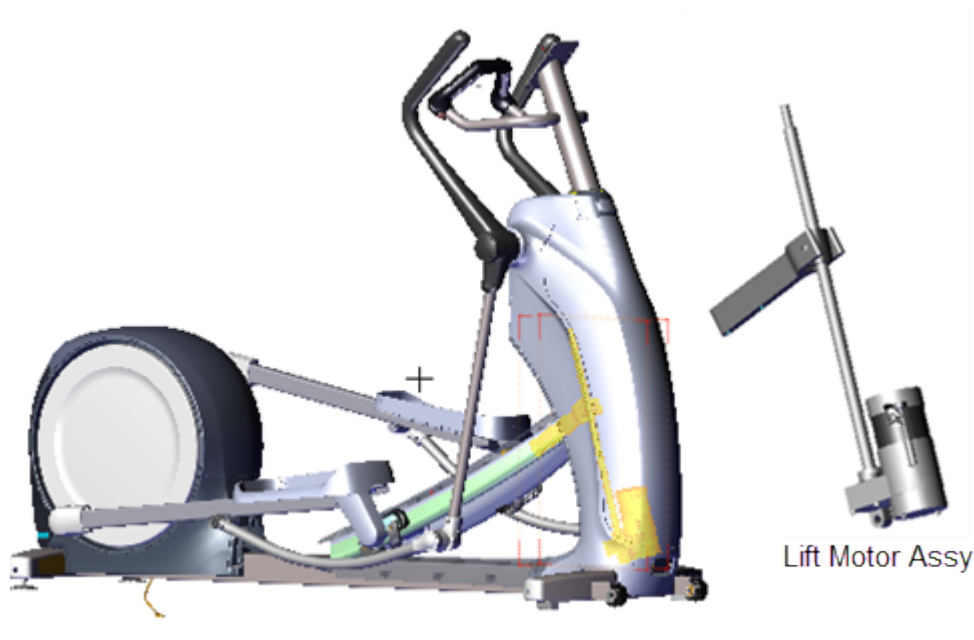
Lift Motor Assy

Specifications

System Component	Specification
Lift Motor Calibration Distance*	9 in
Yoke/Ramp Fasteners	320 in-lbs (236.2 Nm)
Note: * Calibration distance is set at incline level 10.	

Lift motor power

Lift motor power is provided by the battery thru the lift motor fuse located on the **LPCA**[1] board, see "LPCA Fuse Locations" on page 107.

Procedure

Review entire procedure before starting.

---

[1]Lower PCA board

Jack Screw

Yoke Assy
Yoke Nut

LIft
Actuator
Motor

* Fastener
threads on
bottom

Hitch and Clevis
Pin
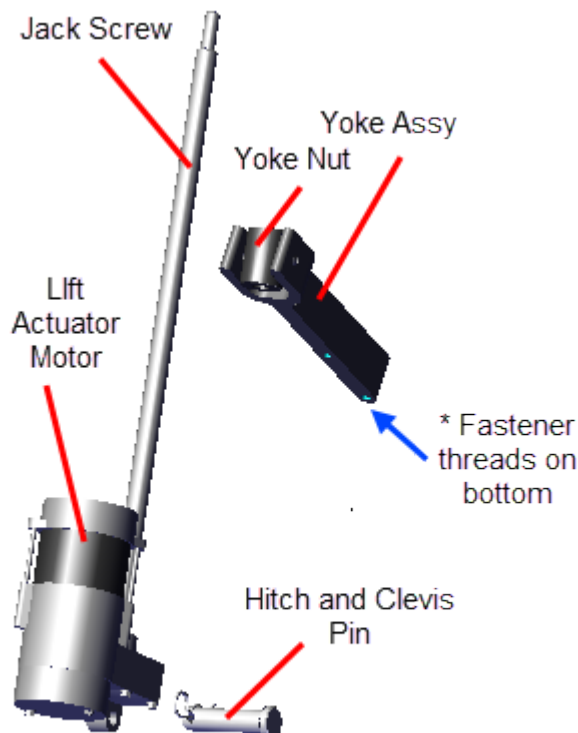
Lift Motor Assembly

Removal Instructions

1. Remove the Front Lift cover, Lift Interface Plate cover, and Ramp cover, see "Front Lift Cover Replacement" on page 49, "Lift Interface Plate Cover Replacement" on page 51, and "Ramp Cover Replacement" on page 55.

2. Place a protective pad over the top of the Front Frame Cover to protect the surface during this procedure.

3. If the lift motor is working, access the diagnostic **CROSSRAMP TEST** and set the incline level to 10 (select **Pause** > type **51765761** > select **MACHINE TEST** > **CROSSRAMP TEST** and set the **INCLINE LEVEL to 10**).

⚠️ **CAUTION**:Be careful to not jam the crossramp when operating in CROSSRAMP TEST mode while there is an active lift error code (E40, E42, E45, E46) . There are no software position limit stops in this mode of operation.

4. Disconnect the Lift Motor Assembly input power/control cable.

⚠️ **WARNING**: Make sure to disconnect the Lift Motor input power/control cable or it is possible for the crossramp to automatically lower to level 1 if either the pedals or arms are moved. . This unexpected action could cause personal injury.

5. Place blocking material (hard foam or similar material) between the underside of the ramp and front frame cover to support and keep the ramp in the raised position.
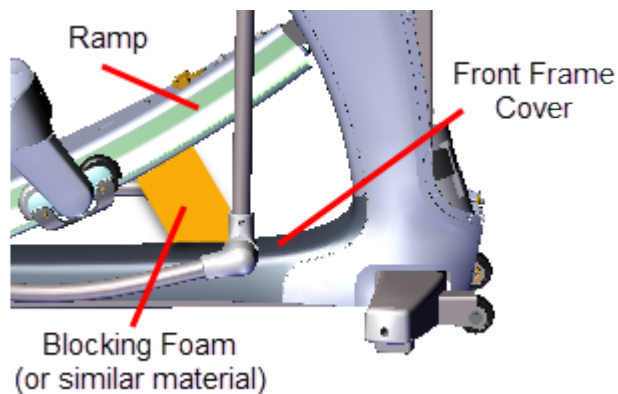
6. Use a 9/16" socket to remove the two ramp-yoke fasteners and remove the yoke from the ramp. Take Note that the ramp will fall when the fasteners are removed. Make sure the ramp is supported before removing the fasteners. Retain fastener hardware for installation.
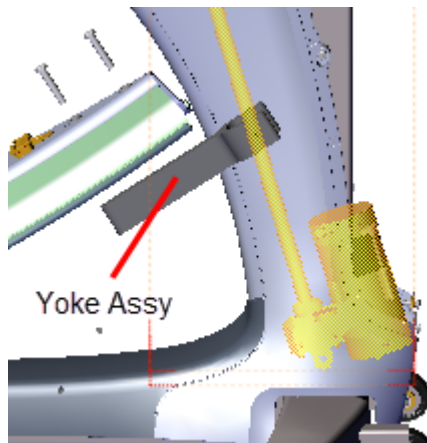
7. Remove the hitch pin from the Lift Motor clevis pin fastener. Slide the clevis pin to the right enough for the pin to clear the left side of the mounting bracket. Then lift and remove the Lift Motor Assembly from the mounting bracket. The clevis pin does not need to be removed to remove the Lift Motor Assembly. Retain fastener hardware for installation.
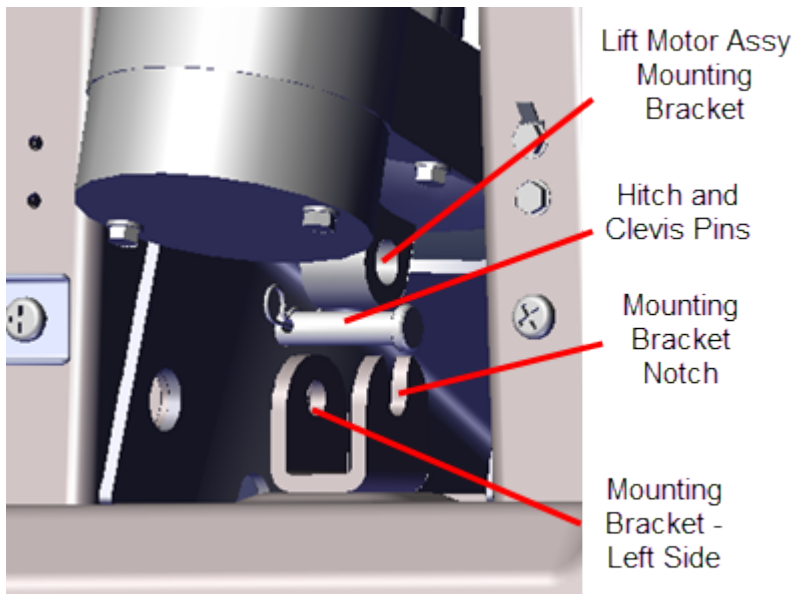
8. Remove the Yoke Assembly from the jackscrew and retain. The Yoke Assembly will be needed for the replacement assembly.

Installation Instructions

1. Lay the replacement Lift Motor on the floor in front of the elliptical and connect the input power/control cable.

2. .Access the diagnostic **CROSS RAMP** (select **Pause** key > type **51765761** > select **MACHINE TEST** > **CROSSRAMP TEST**) and set the ramp level to 10. The jackscrew must remain at this position during the remainder of this procedure.

3. Disconnect the input power/control cable.

4. During the Yoke installation process, do not allow the jackscrew to rotate (need to maintain the level 10 incline position). Hold the jackscrew in position with one hand while Installing the Yoke Assembly onto the jackscrew with the other. Place the Yoke onto the jackscrew with the ramp bolt fastener threads on the bottom (closest to the Lift Motor).

    Adjust the Yoke Assembly so that the distance from the top of the jackscrew to the top of the yoke nut is 9 in.

    Final Lift Motor Installation Calibration Adjustment:
    The Yoke may need to be slightly rotated during installation to correctly align the ramp-yoke mounting holes causing the calibration distance to slightly change. If this occurs, determine the best Yoke position by rotating the yoke in either the clockwise or counter-clockwise directions using the position that provides the closest distance to the 9 in spe-

cification.

> **Note**: Make sure to install the Yoke Assy with the ramp fastener threads on the bottom (closest to the Lift Motor).
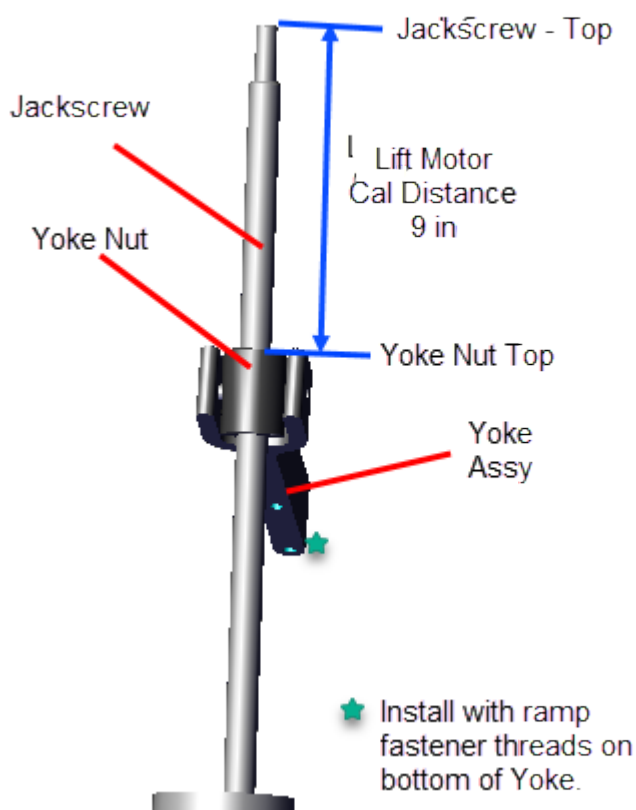
5. Prepare the Lift Motor for installation by sliding the clevis pin through the Yoke Assembly mounting bracket right side until flush with the left inside of the lift motor mounting bracket. Then install lift motor assembly so that the clevis pin rests in the weldment frame mounting bracket notch. While installing carefully guide the Yoke into mounting position under the ramp and that the top of the jackscrew clears any obstructions. Continue to slide the clevis pin through the weldment frame bracket and secure with the hitch pin.
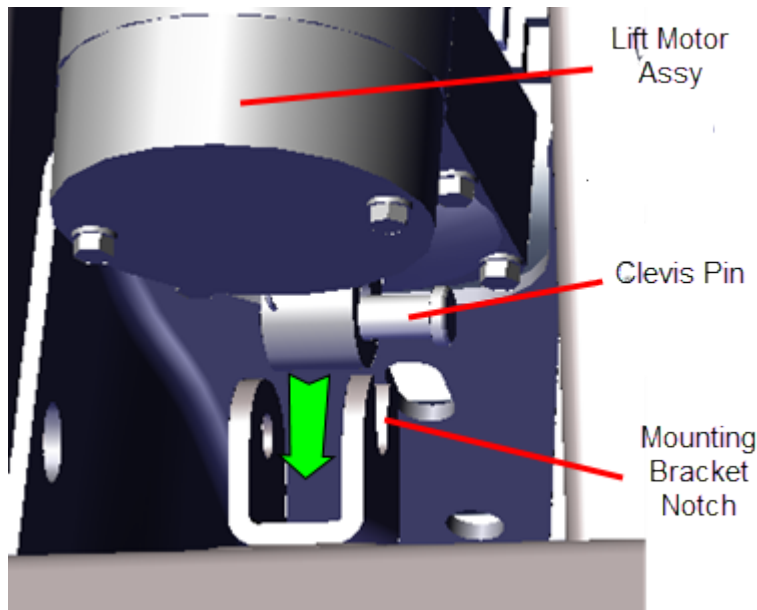
6. Reattach the Yoke to the Ramp using the two fasteners, torque to 320 in-lbs (236.2 Nm).

7. Remove any blocking materials and/or pads.

8. Reconnect the Lift Motor input power/control cable.

9. Verify the elliptical incline operation through the full range of motion, levels 1 though 10.

10. Verify the lift motor calibration distance:

    a. Access the diagnostic **CROSSRAMP TEST** and set the incline level to 10.

    b. Disconnect the input power/control cable.

    c. Measure and verify the Lift Motor calibration distance remains 9 in.

    d. Reconnect the input power/control cable.

11. Do the diagnostics **CROSSRAMP TEST**.

12. Reinstall the Ramp cover, the Lift Interface Plate cover, and the Front Lift cover, see "Front Lift Cover Replacement" on page 49, "Lift Interface Plate Cover Replacement" on page 51, and "Ramp Cover Replacement" on page 55.

13. Verify machine operation and return to service, see "Operation Verification" on page 11.

Note: This procedure may have generated lift motor related error codes. Check the error log and clear related error codes.

See Also

"Lift Motor Calibration" on page 40

LPCA (Lower PCA) Board Replacement

About

This procedure provides instruction to remove and install the **LPCA**[1] (Lower PCA) board.
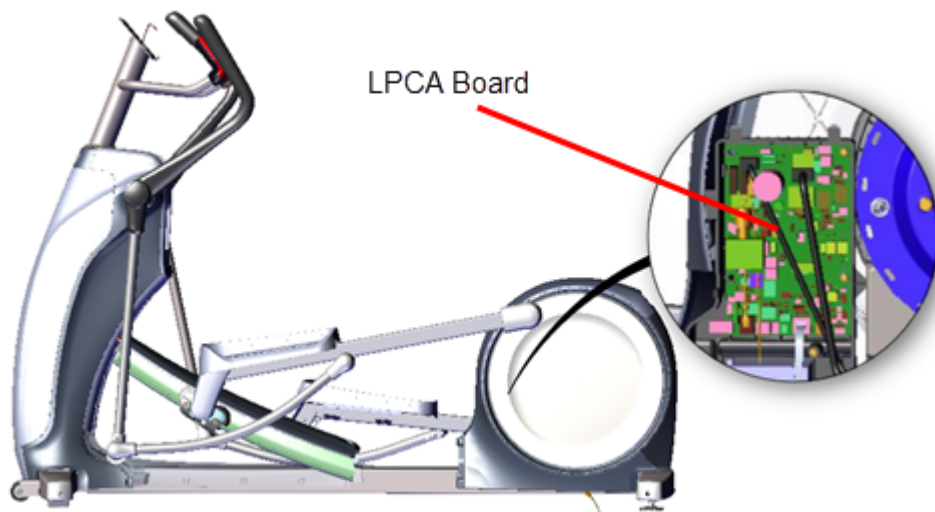
LPCA Board

LPCA System Block Diagram
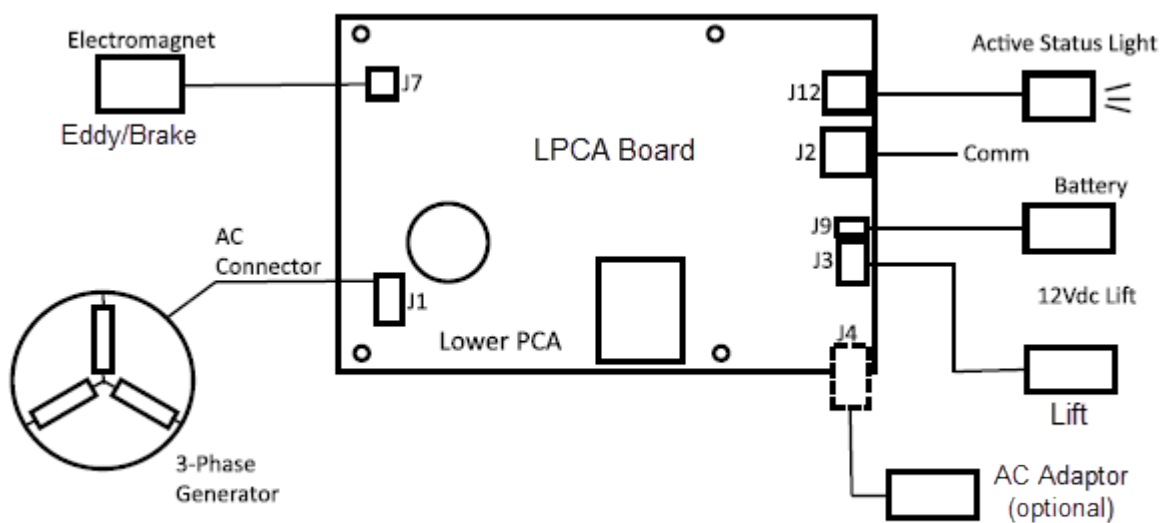
LPCA System Block Diagram

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[1]Lower PCA board

LPCA Interface Connections

ID	Interface
1	Lift (J3)
2	Battery (J9)
3	Comm Serial (J2)

ID	Interface
④4	Active Status Light (J12)
⑤5	Generator (J1)
⑥6	Eddy/Brake (J7)
⑦7	AC Adapter (J4)

LPCA Fuse Locations

There are two replaceable fuses located on the LPCA board:

- 2 Amp LPCA power supply
- 6.3 Amp lift motor fuse.

LPCA power supply (2 A)

Lift motor (6.3 A)
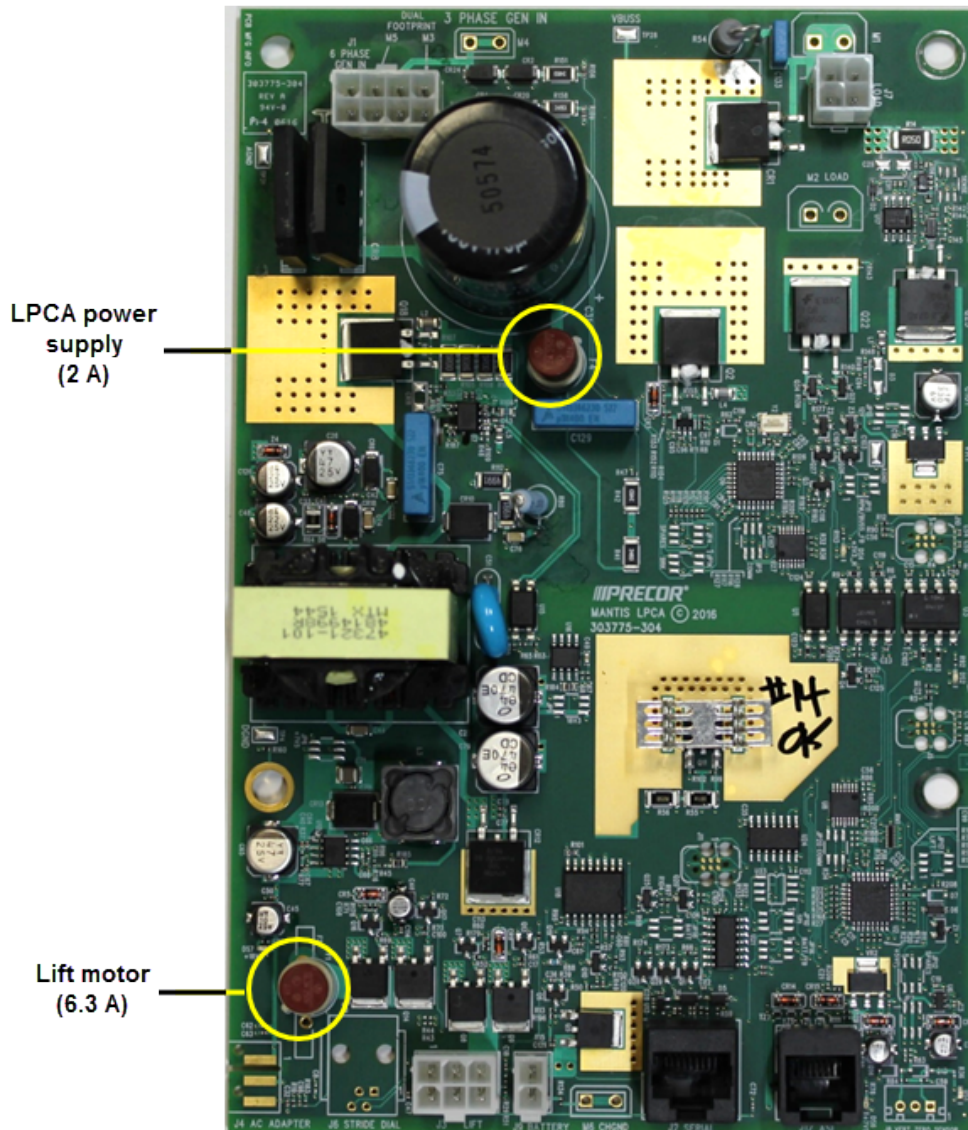
Procedure

Review entire procedure before starting.

Removal Instructions

1. Remove the Left Drive Disk Cover, see "Drive Disk Covers Replacement" on page 57.
2. Remove the one #2 Phillips screw fastener and remove the LPCA/Battery Module cover. Retain fastener hardware for installation.
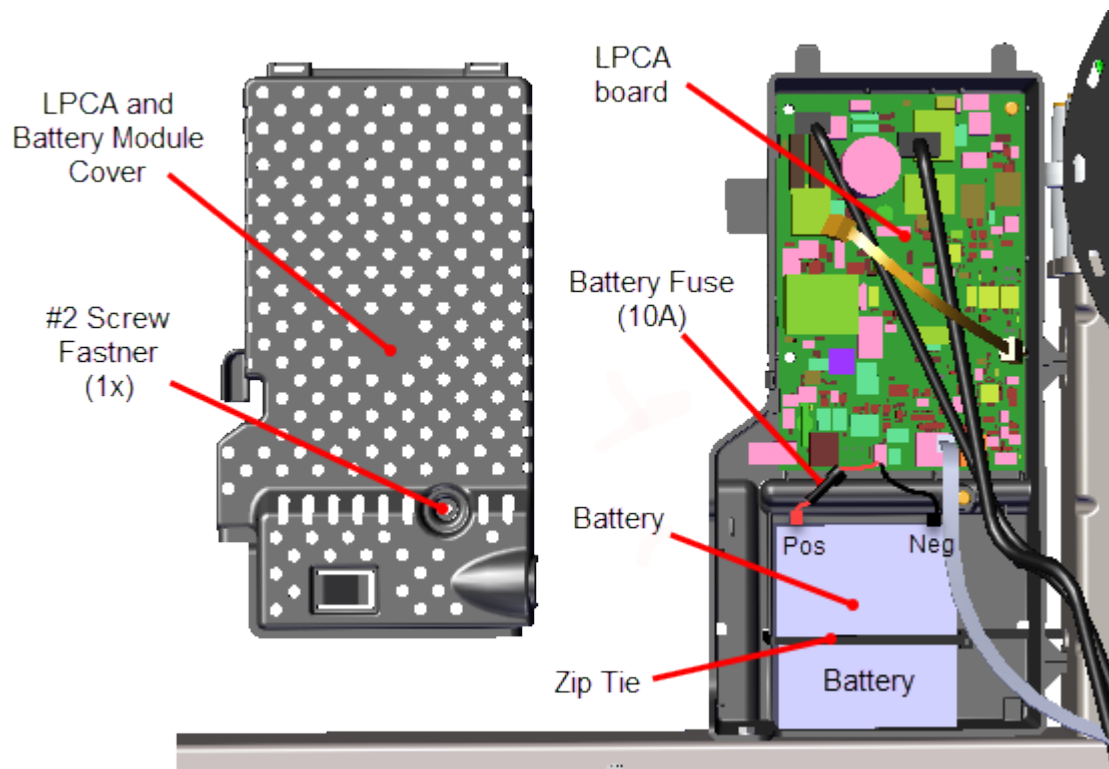
3. Disconnect the Positive (Red) and Negative (Black) battery terminal cables.

4. Remove the following LPCA interface cables:

a. Disconnect the Generator (J1) cable **5** .

b. Disconnect the Eddy/Brake (J7) cable **6** .

c. Disconnect the Lift (J3) cable **1** .

d. Disconnect the Battery (J9) cable **2** .

e. Disconnect the Comm Serial (J2) cable **3** .

f. Disconnect the Active Status Light (J12) cable **4** .
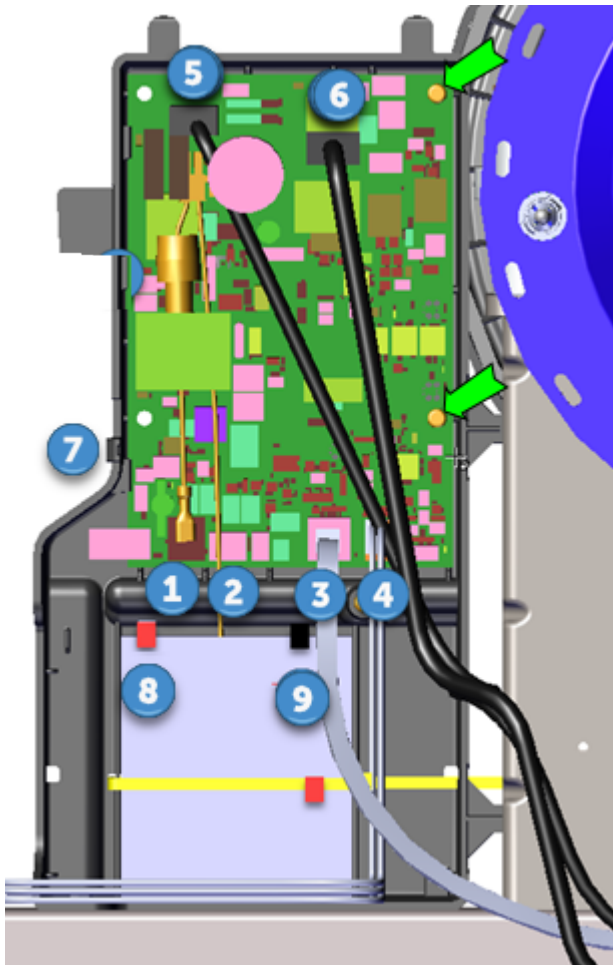
5. Remove the two #2 Phillips screw fastener and remove the LPCA board. Retain fastener hardware for installation.

6. If attached, disconnect the AC Adapter (J4) cable ⑦.

LPCA
(Lower PCA Board)
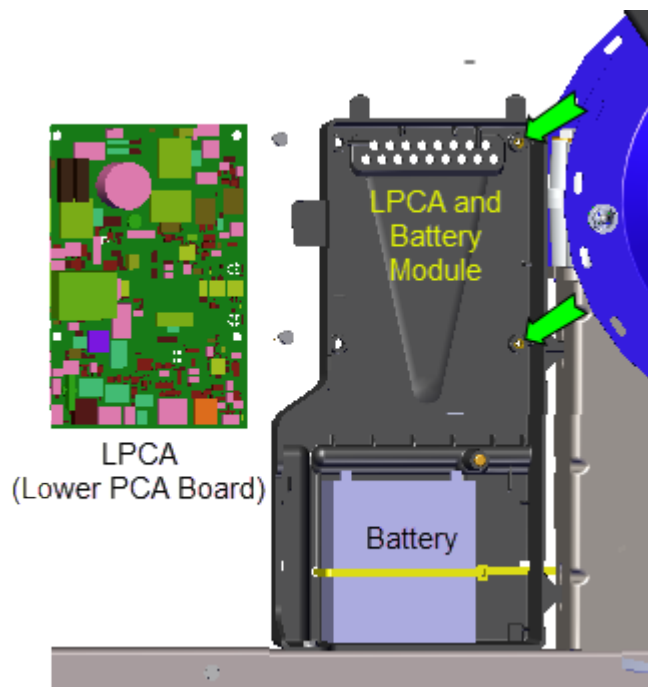
Installation Instructions

1. If removed, reinstall the AC Adapter (J4) cable **7** .

2. Reinstall the LPCA board using the two #2 Phillips screw fasteners.

3. Reconnect the following LPCA interface cables:

   a. Reconnect the Lift (J3) cable **1** .

   b. Reconnect the Battery (J9) cable **2** .

   c. Reconnect the Comm Serial (J2) cable **3** .

   d. Reconnect the Active Status Light (J12) cable **4** .

   e. Reconnect the Generator (J1) cable **5** .

   f. Reconnect the Eddy/Brake (J7) cable **6** .

4. Reconnect the Positive (Red) and Negative (Black) battery terminal cables.

5. Reinstall the LPCA/Battery module cover using the one #2 Phillips screw fastener.

6. Reinstall the Left Drive Disk cover, see "Drive Disk Covers Replacement" on page 57.

7. VVerify machine operation and return to service, see "Operation Verification" on page 11.

Fixed Arms Replacement

About

This procedure provides instruction to remove and install the Fixed Arms.

Specifications

System Component	Specification
Set Screw Fastener	300 in-lbs (34 Nm)
Flat Head Screw Fastener	25 in-lbs (2.8 Nm)

Procedure

Review entire procedure before starting.

Removal Instructions

Repeat this procedure for both the right and left Fixed Arms.

1. Remove the Top Lift cover, see "Front Lift Cover Replacement" on page 49.

2. Use a 3/16" hex key to remove the Fixed Arm Mounting Bar - Inner set screw and to loosen the Outer set screw (the outer set screw does not need to be removed). Retain fastener hardware for installation.

Fixed arm (left)

Handlebar mount clamp

Fixed arm mounting bar set screws
(outer)   (inner)
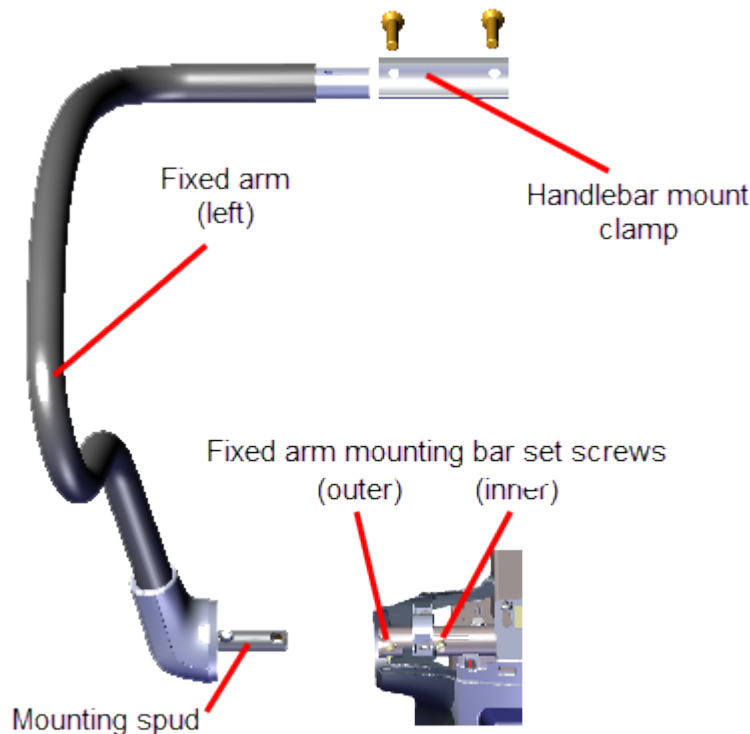
Mounting spud

3. Use a 5/32" hex key to remove the two fasteners and remove the handlebar mount clamp located at the front top of the console mount weldment. Hold arm while removing clamp.

4. Carefully remove the fixed arm mounting spud from the mounting bar.

5. Repeat procedure for both left and right Fixed Arms.

Installation Instructions

1. Reinstall the Fixed Arm mounting spud into the Fixed Arm mounting bar.

2. Rotate arm and position into the clamp mounting bracket. Reinstall the.handlebar mount clamp and secure with the two fasteners. Fully tighten and torque fasteners to 25 in-lbs (2.8 Nm).

3. Reinstall the outer set screw. Fully tighten both the inner and outer set screws. Torque fasteners to 300 in-lbs (34 Nm)

4. Repeat procedure for both left and right handle bars.

5. Verify machine operation and return to service, see "Operation Verification" on page 11.

Moving Arms Replacement

About

This procedure provides instruction to remove and install the Moving Arms.
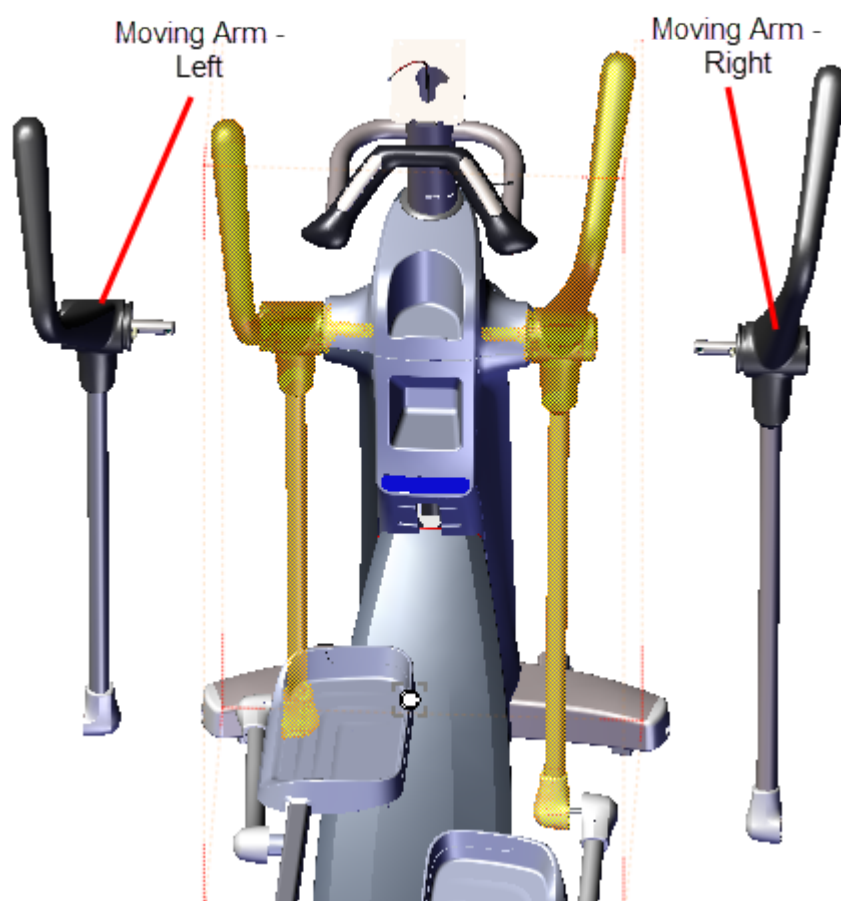
Specifications

System Component	Specification
Link Arm Fastener	300 +/- 90 in-lbs (34 +/- 10 Nm)

Procedure

Review entire procedure before starting.

Removal Instructions

Repeat this procedure for both the right and left Moving Arms.

1. Remove the Top Lift cover, see "Front Lift Cover Replacement" on page 49.
2. Remove the #2 fastener and the Moving Arm - Outer Linkarm cover.
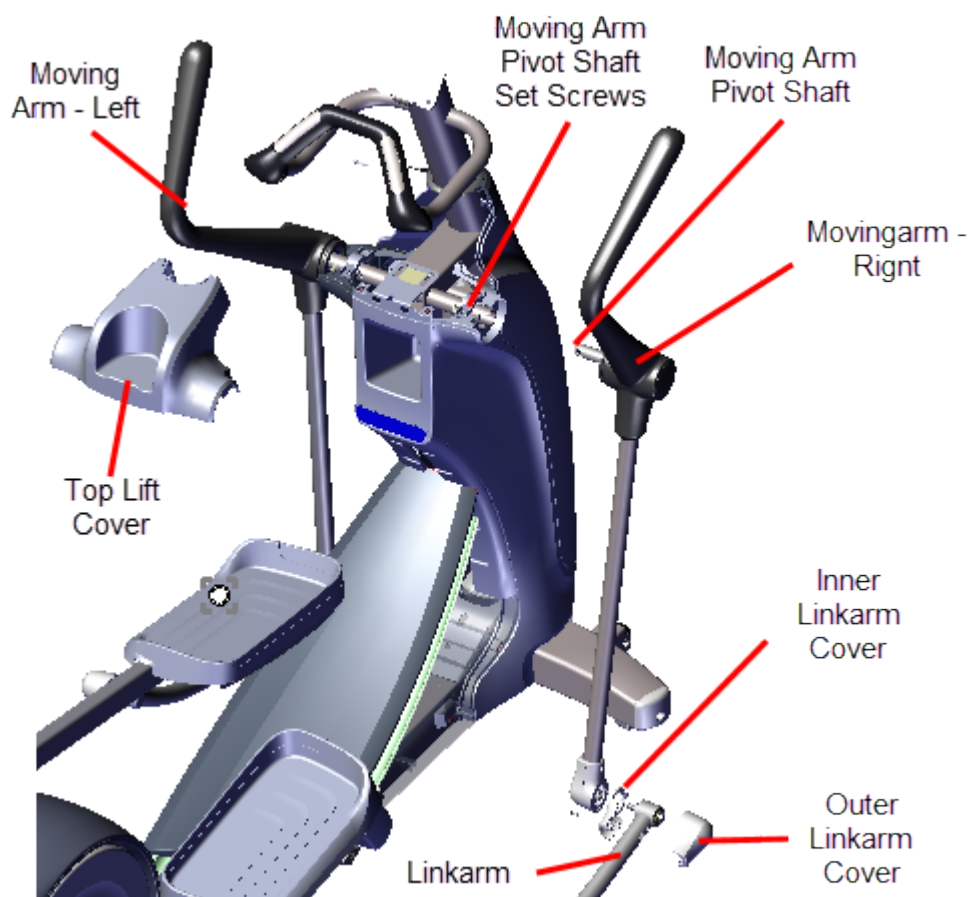
3. Use a 9/16" socket to remove the Linkarm fastener. Remove the Linkarm and Inner Link-arm cover.

4. Use a 3/16" hex wrench to remove the Moving Arm Pivot Shaft inner set screw and loosen the outer set screw. Remove the Moving Arm from the pivot shaft mount. Retain fastener hardware for installation.
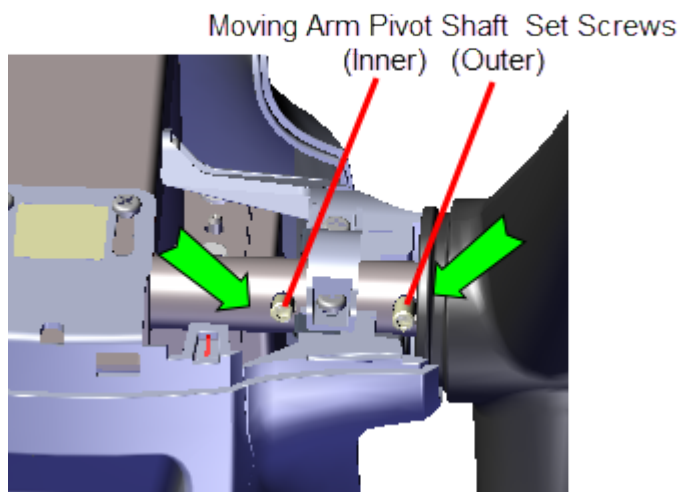
5.

Installation Instructions

1. Reinstall the Moving Arm Pivot Shaft into the pivot shaft mounting bar. Reinstall the Moving Arm Pivot Shaft inner set screw. Tighten both the inner and outer set screws. Torque the fastener to 300 in-lbs (34 Nm).

2. Reinstall the Inner Linkarm cover and then the attach the Linkarm to the Moving Arm Link mount, torque the fastener to 300 +/- 90 in-lbs (34 +/- 10 Nm).

3. Reinstall the Outer Link Arm Cover and secure with the #2 Phillips fastener.

4. Verify machine operation and return to service, see "Operation Verification" on page 11.

Stairarm Replacement

About

This procedure provides instruction to remove and install the Moving and Fixed Arm model Stairarms.
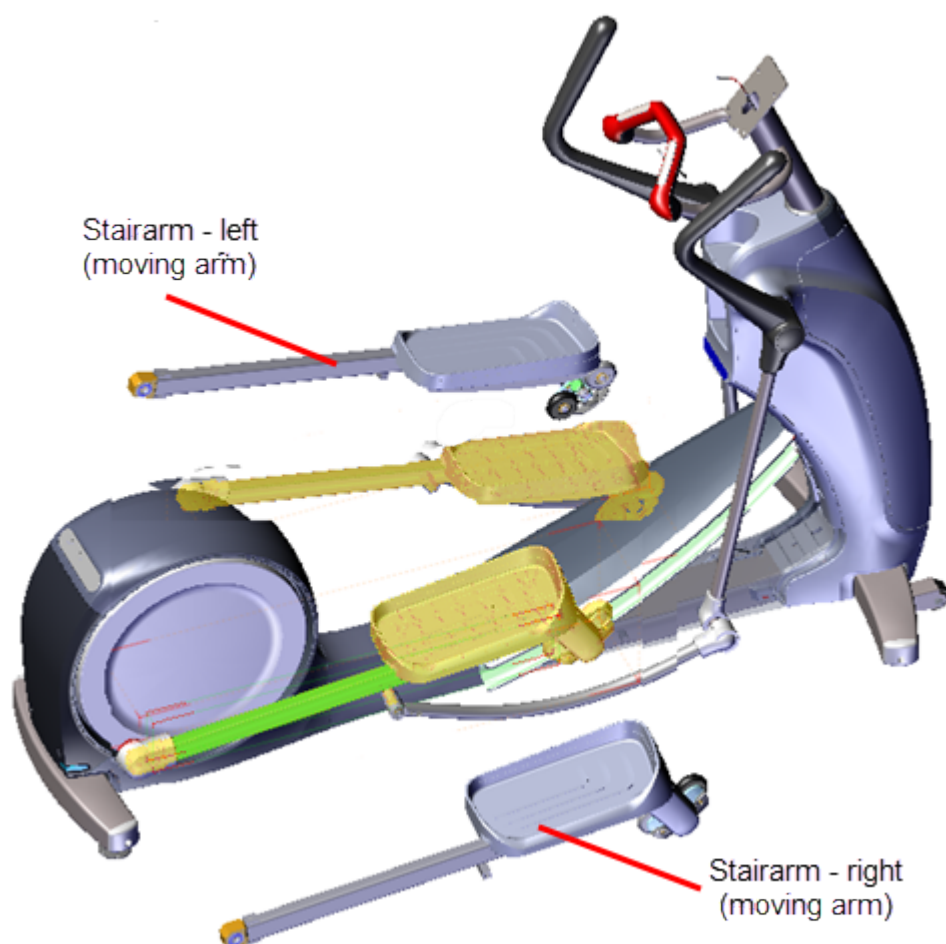
Specifications

System Component	Specification
Link Arm Fastener	300 +/- 90 in-lbs (34 +/- 10 Nm)
Crankarm Retention Plate Fastener	30 +/- 9 in-lbs (3.4 +/- 1 Nm)

Procedure

Review entire procedure before starting.

Stairarms
(Moving arm models)

Crankarm Spindle
Connection

Linkarm
connection

Outer Link Cover

Outer Pivot Block
Cover
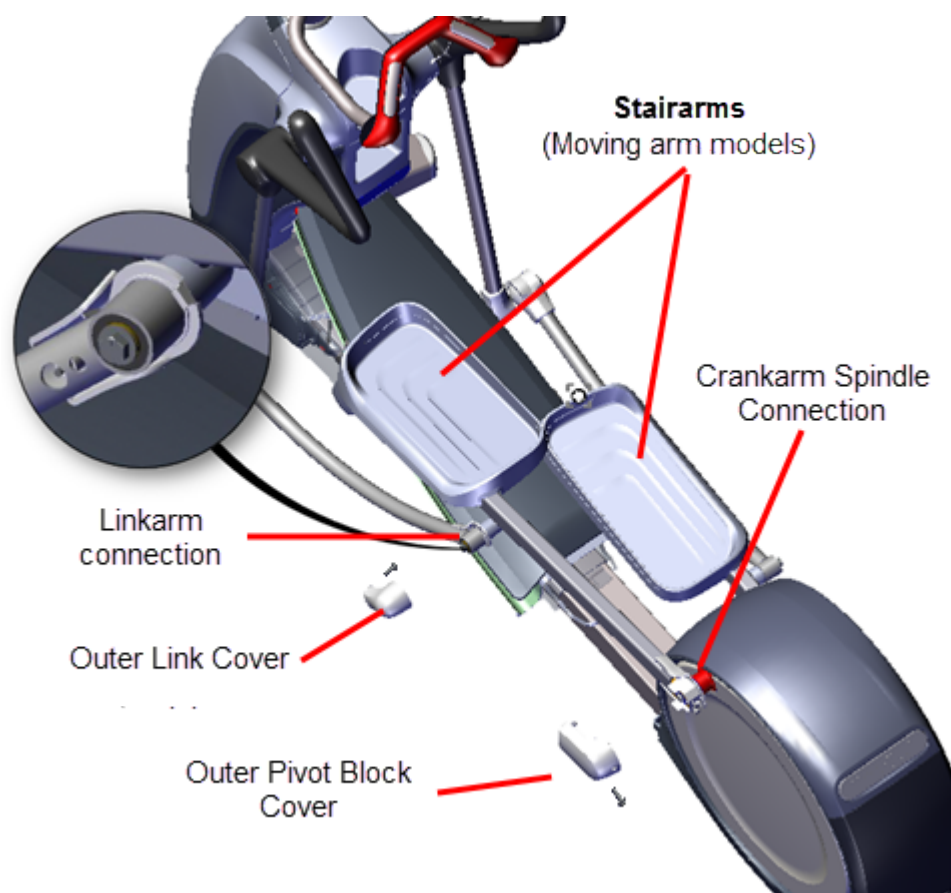
Removal Instructions

Repeat this procedure for both the right and left moving arm replacement.

1. Remove the stairarm from the crankarm spindle:

a. Remove the #2 Phillips screw fastener and slide the Outer Pivot Block cover rearward and away from the frame to remove. Retain fastener hardware for installation.

b. Remove the #3 Phillips Nylok patch Retention Plate fastener and the Crankarm Retention Plate. Discard the fastener bolt and retain the Crankarm Retention Plate for installation.

> ⚠ **CAUTION**: Do not reuse the removed Retention Plate Nylok patch bolt fasteners for installation. Discard the removed bolts and order new bolts for installation.

c. Use external retaining ring pliers to remove the stairarm pivot block retaining ring. Retain fastener hardware for installation.

d. Remove the stairarm off the crankarm spindle and carefully lay on the ground.

2. Roll the stairarm down and off the end of the ramp roller track.

3. Remove the linkarm from the stairarm (Moving arm models only):.

a. Remove the #2 Phillips screw fastener and remove the Outer Linkarm Cover. Retain fastener hardware for installation.
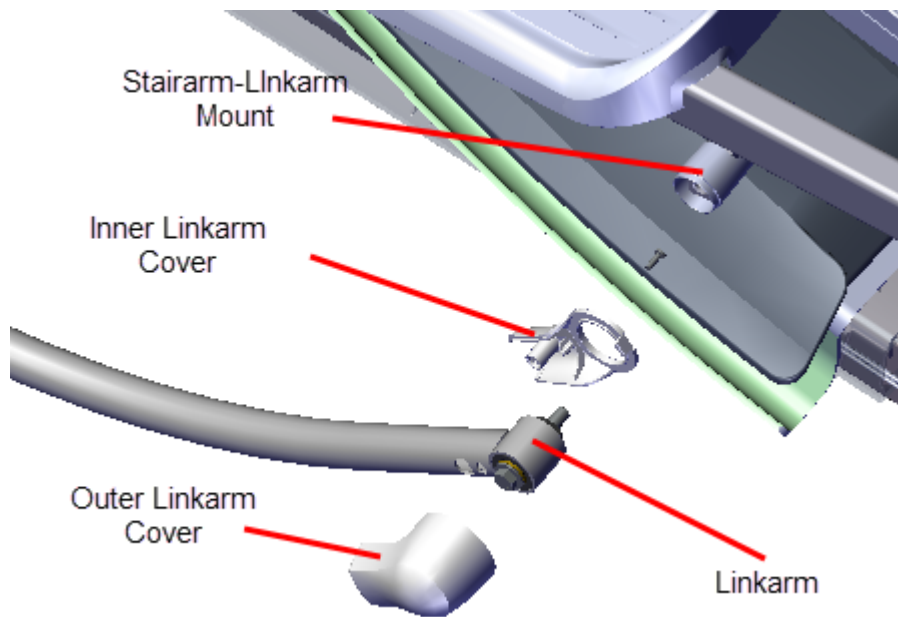
b. Use a 9/16" socket to remove the stairarm Linkarm fastener. Then remove the Stairarm and Inner Linkarm cover. Retain hardware and fastener for installation.

Installation Instructions

1. Reinstall linkarm onto the stairarm (Moving arm models only):

    a. Reinstall the Linkarm Inner Cover and then the Linkarm onto the Linkarm mounting spud. Secure with the fastener and torque to 300 +/- 90 in-lbs (34 +/- 10 Nm).
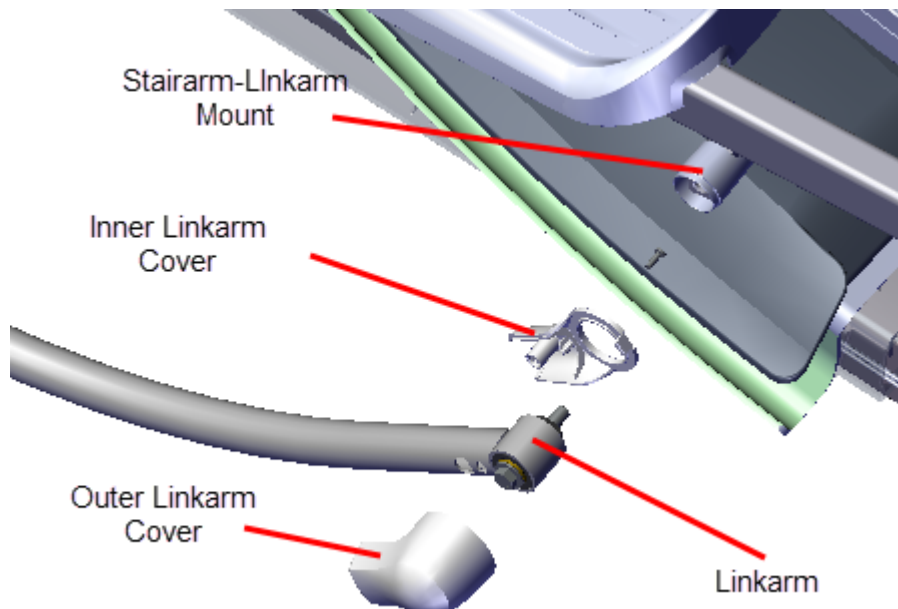
2. Reinstall the stairarm rollers onto the ramp. Carefully slide the rollers onto the lower ramp track and slide up the ramp.
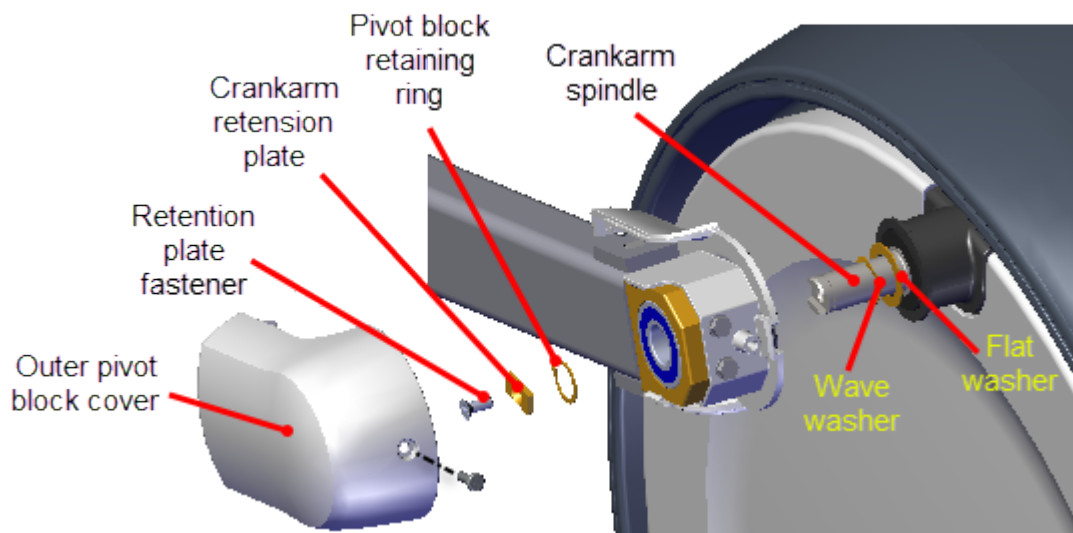
3. Reinstall the stairarm onto the crankarm spindle.

    a. Make sure the pivot block inner flat washer and wave washer are installed in the order shown on the crankarm spindle (flat washer then wave washer). Then slide the stairarm onto the crankarm spindle.

    b. Reinstall the pivot block retaining ring.

    c. Reinstall the Crankarm Retention Plate and secure with a new Nylok patch fastener. Torque to 30 +/- 9 in-lbs (3.4 +/- 1 Nm)

⚠️ **CAUTION**: Do not reuse the removed Retention Plate Nylok patch bolt fasteners for installation. Discard the removed bolts and order new bolts for installation.
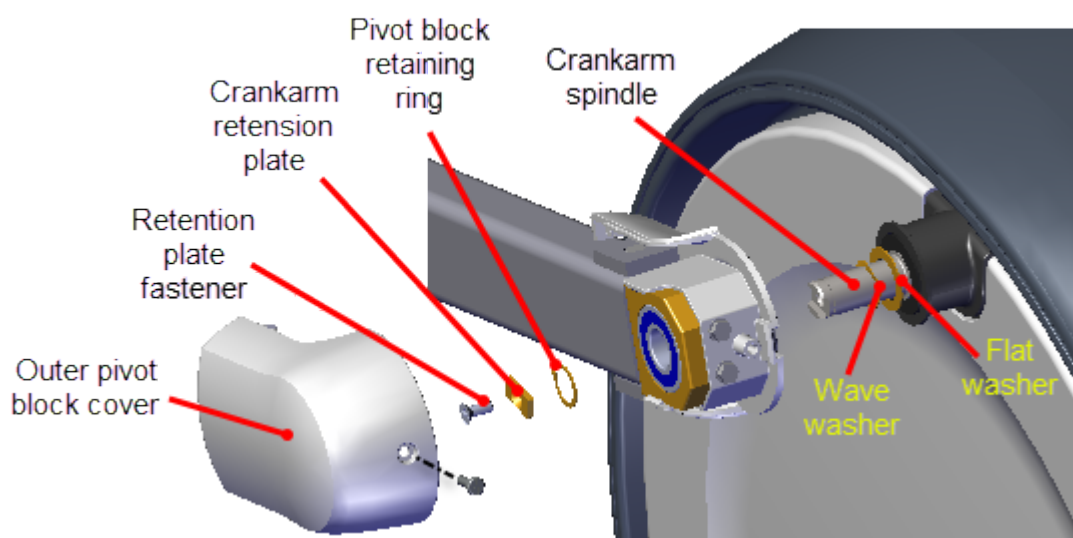
2. Reinstall the outer Pivot Block cover and secure with the #2 Phillips screw fastener.

3. Verify machine operation and return to service, see "Operation Verification" on page 11.

6   Troubleshooting

About

This section contains troubleshooting information to help you identify, isolate, and resolve component and system issues.

Review the *Introduction To Troubleshooting* section below to learn about the troubleshooting process, troubleshooting best practices, and other pertinent information that will help you efficiently troubleshoot issues and return the equipment to service.

Information that will help you troubleshoot:

- Review the "Introduction To Troubleshooting" below section below.
- Review the "Standard Error Codes" on page 125 topic.
- Review the About the Error Log topic.
- Refer to the " Error Code Troubleshooting Guide" for error code description and troubleshooting repair information.
- Review the " Active Status Light (ASL)" on page 133 topic.
- Review the "System Troubleshooting Procedures" on page 139 topic.

Introduction To Troubleshooting

Troubleshooting issues is an investigative process best implemented utilizing a systematic approach that efficiently targets the issue cause allowing correct equipment repairs and return to service. The following information will help you to systematically troubleshoot and resolve issues.

Basic Steps

Validate the customer reported issue:

The failure that is reported may differ from your observations as a trained technician. Many reported failure are not true failures and can be fixed without a customer visit.

- (powered units only) Always ask the customer if the unit power is connected and switched ON.
- Further interrogate the customer to determine if this is the real issue requiring an on-site visit or possibly a different issue that can be simply resolved over the phone.

Verify the Input Power Condition (Powered units only)

Always begin by verifying the input power is connected and switched "ON". Also make sure the input power is within the specified power limits ("General Information" on page 3). Poor quality, intermittent, and/or out-of-spec input power will cause operational failures.

- ○ If the unit power does not switch "ON" or trips the circuit breaker, see .*Troubleshooting Tripped Breakers*,

- ○ If the console does not power up, see *Troubleshooting Console Power.*

Verify that the console is operating correctly

Run the Display, and Keypad diagnostic tests (see "Hardware Validation Service Menu (51765761)" on page 18). Resolve any failures.

Note: Keep in mind that if a key on the keypad does not function, the lower control module will not receive a user initiated request for action. For failed keys problems, the cause for the failure would not be in the lower PCA or the unit base and no error codes will be logged.

Review the Error Log or CPA[1] Event Log for any active error codes

Always review the Error Log or CPA Event Log when troubleshooting an issue. The error logs will contain any triggered error code events and related information. You can then refer to Error Code Troubleshooting Guide to help resolve the issue. Also, when calling Precor customer service for assistance, refer to the Error Log or CPA Event Log for additional information to help the representative resolve the issue.

Refer to the Error Code Troubleshooting Guide for error code descriptions and repair information.

IMPORTANT: Error Code description and Troubleshooting information is contained in the *Error Code Troubleshooting Guide*, see Error Code Guide.pdf.

Note: Not all failures trigger an error event code. Many issues are purely mechanical in nature and therefore cannot trigger an error event code.

Verify (reproduce) the issue.

Operate the unit in normal user mode to verify if the reported failure can be reproduced. Is this a repeatable or intermittent type failure. Make note of any additional observations (noises, vibrations, etc.) that occur at the time of the failure which may help resolve the issue.

Note: It is important to keep in mind that some issues are weight (load) related. You may need to increase the exerciser weight to reproduce the failure.

Perform hardware validation diagnostic tests

Access the Hardware Validation Diagnostic Tests service mode and run any related tests that might help isolate the cause of the issue, see "Hardware Validation Service Menu (51765761)" on page 18. These tests will help identify good and failed components. Resolve any resulting failures.

Verify Club settings

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[1]Control Processing Assembly

Verify that one of the Club Settings (see "Club Settings Service Menu (5651565)" on page 20) parameter limits are not causing the issue. If a failure is observed while using the machine but passes the hardware validation diagnostic tests, this could be an indication that one of the club parameters limits settings is causing the issue.

Verify that there are no new error codes

After correcting the issue, reopen the Error Log and verify that there are no remaining active error codes. This will verify that the original error codes are not reoccurring and that there are no new error code issues. If the error code is reoccurring, the issue may be mileage related, review the error code odometer history to verify if the error event is related to mileage intervals.

On P10, P20, and P30 consoles, clear the error log by pressing and holding the "**Quick Start**" key.

> **Note**: If there is no logged error codes and the issue persists, you will need to use observable and audible indicators to identify the source of the failure. Also make sure that there are no related service bulletins that may resolve the issue. Browse the list of available Troubleshooting procedures for related Troubleshooting information.

Verify service bulletins

Review the list of machine service bulletins and tech-tips and verify that there are no current bulletins that may fix the issue.

Standard Error Codes

About

There is a set of standard error codes implemented across Precor exercise equipment. Error codes are system generated error codes designed to detect and report fault conditions. Each error code is associated with a particular system or component fault condition. The maintenance software monitors error code event conditions, when a fault is detected, the error code is stored in the Error Log along with the event mileage, hours, and motor current.

Error code numbers range from 01 to 99. There are also a small number of alpha and alpha-numeric codes. Most error codes are grouped into numeric ranges to help easily identify common system issues. However not all error codes follow these guideline. Refer to the Error Code Troubleshooting Guide for a complete list of error codes and Troubleshooting information.

IIIPRECOR®

Error 80 - 83 (P30 Only) ▸ **UPCA** ◂ Error 00 - 09

Error 30 - 33 ▸

Error 10 - 19 ▸ **Lower Control Module**

Error 40 - 45 ▸ Error 60 - 61

Lift System **Auto Stop**

Error 20 - 29 ▸ **Drive Motor**

* Not all error codes follow this system numbering convension.
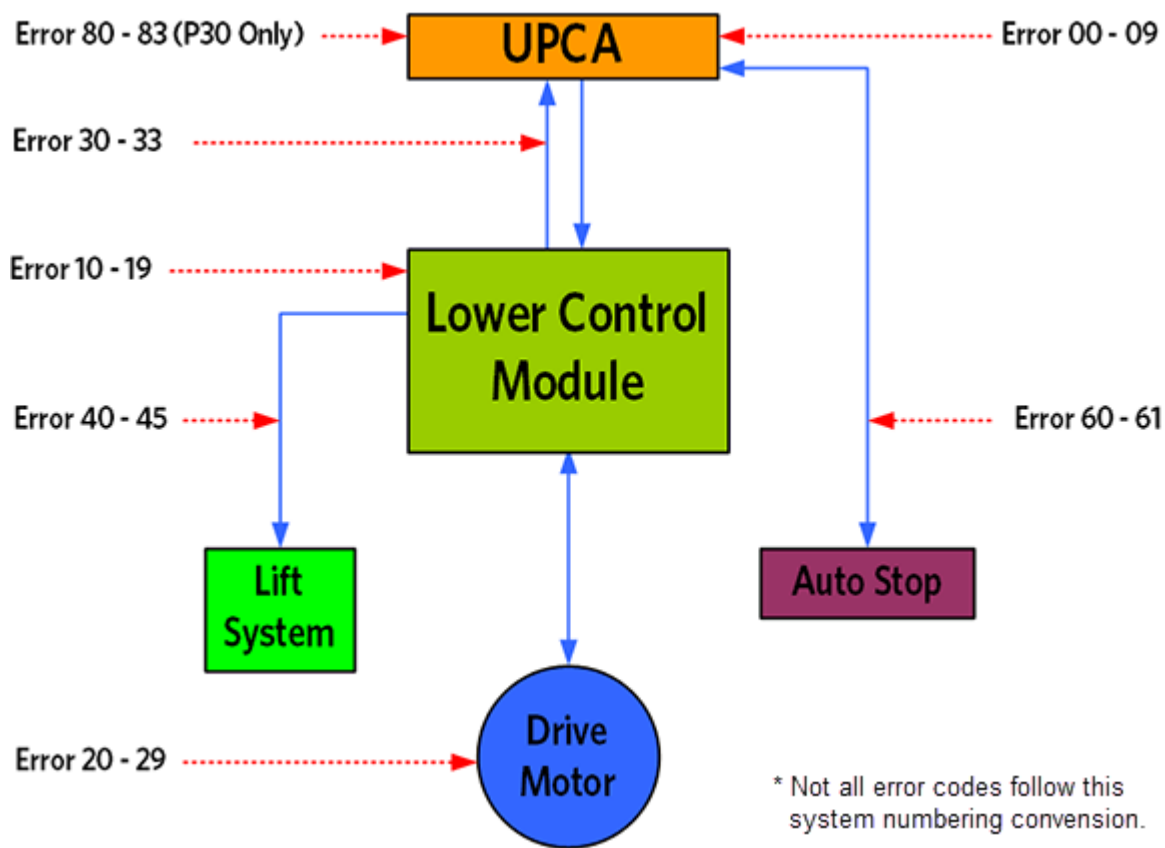
Viewing Logged Error Codes

Error event codes are logged, stored, and viewed in either the **Error Log** or **Event Log** depending on the console model, see .Error Log & Event Log

P10, P20, and P30: access **Information Display** (6,5) > select **Error Log**.

(i) **TIP**: Deleting Error Codes from the Error Log: Press and hold the **PAUSE/RESET** key for a minimum of 6 seconds to open the Error Log and view all logged error codes. If there are no logged error codes, the "Stuck Key" message will show. To remove error codes, select the error code and press/hold the **QUICK START** key until the "NO ERRORS" message shows.

P62, P80, and P82: Access **Hardware Validation** (5,1,7,6,5,7,6,1) > select **About > CPA**[1] **Event Log**

📋 **Note**: Unlike the Error Log, error codes cannot be manually removed from the CPA Event Log.

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[1]Control Processing Assembly

Available Error Codes

A complete list of error codes including the code description, related issues/symptoms, troubleshooting and repair information is provided in the *Error Code Troubleshooting Guide*, see Error Code Troubleshooting Guide.

The *Error Code Troubleshooting Guide* contains the following information:

- The error code description
- The affected system components
- The Issues and Symptom information
- Troubleshooting and repair information

IMPORTANT: Error Code description and Troubleshooting information is contained in the *Error Code Troubleshooting Guide*, see Error Code Guide.pdf.

Troubleshooting with Error Codes

Getting Started

You will need a copy of the "*Error Code Troubleshooting Guide*" to learn Information about the error codes including the code description, related issues/symptoms, troubleshooting and repair information, click Error Code Troubleshooting Guide.

Using Error Codes to troubleshoot

1. Access the service software "Error Log & Event Log" on page 131 Information Display to view any current or past error code events.
2. Go to the Error Code Troubleshooting Guide, look up the error code and follow the Troubleshooting information

IMPORTANT: Error Code description and Troubleshooting information is contained in the *Error Code Troubleshooting Guide*, see Error Code Guide.pdf.

Error Log & Event Log

About

The **Error Log** and **Event Log** information displays contain a historical record of triggered Error Event Codes and related information. The Error Log and Event Log are similar displays used on different console models. The P10, P20, and P30 use the Error Log display and the P62, P80, and P82 use the Event Log.

Always refer to the Error Log or Event Log when troubleshooting an issue. The error logs will contain any triggered error code events and related information. You can then refer to Error Code Troubleshooting Guide to help resolve the issue. Also, when calling Precor customer service for assistance, refer to the Error Log or Event Log for additional information to help the representative resolve the issue.

Error event codes are sequentially stored as a table in memory in a First-In Last-Out basis, the newest error code is stored in the number one position pushing any current error codes down one position. When the memory is full, the oldest error code is pushed off the stack and removed from memory.

When an error event is detected, the error code and related information will be stored into the error log. However, when multiple instances of the same error code event occur within the same Hour or Odometer reading, only the first occurrence will be logged. Either the one hour limit is exceeded, or a change to the Odometer mileage, or a different intervening error code is logged must occur before the same repeating error code is logged again.

> **Note**: Multiple repeating instances of the same error code event occurring during the same Hour or Odometer reading will only be logged as a single error code event.

Accessing the Error Log & Event Log

Access either the Error Log or Event Log for your particular console:

P10, P20, and P30: access **Information Display** (6,5) > select **Error Log**.

> **TIP**: Deleting Error Codes from the Error Log: Press and hold the **PAUSE/RESET** key for a minimum of 6 seconds to open the Error Log and view all logged error codes. If there are no logged error codes, the "Stuck Key" message will show. To remove error codes, select the error code and press/hold the **QUICK START** key until the "NO ERRORS" message shows.

P62, P80, and P82: Access **Hardware Validation** (5,1,7,6,5,7,6,1) > select **About > CPA**[1] **Event Log**

> **Note**: Unlike the Error Log, error codes cannot be manually removed from the CPA Event Log.

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[1]Control Processing Assembly

Using the Error Log & Event Log

Error Log

Each logged error event code will be shown on the console message display. The individual data parameters will scroll across the display. Use the Up/Down keys to scroll thru and view the individual error codes.

Typical Error Log data:

- Error Log sequential line item number, 1 thru "n" (1 is the newest error code and "n" is the oldest)
- Error Code Number
- Error Code Description
- Odometer
- Hours
- Motor Current*
- .Input Line Current*
- Input line voltage*
- Buss Voltage*

  * machine dependent parameter.

Removing Error Event Codes:

To remove an error code, select the error code to be removed and press/hold the **QUICK START** key for a minimum of 6 secs until the ."NO ERRORS" message shows.

> **TIP**: Error Log Delete Short Cut:
> Press and hold the **PAUSE/RESET** key for a minimum of 6 seconds to open the Error Log and view all logged error codes. If there are no logged error codes, the "Stuck Key" message will show. To remove error codes, select the error code and press/hold the **QUICK START** key until the "NO ERRORS" message shows.

Event Log

Each logged error event will be shown on the Event Log page. Use the touchscreen vertical scroll bar to scroll thru and view the individual error event data.

The P62, P80, and P82 Event Log provides the same error event code data found in the Error Log plus additional event related data including the event date & time stamp and other OEM factory related error event information (This OEM error event information can be used by Precor customer service to help resolve the issue).

Also, the Event Log includes other none error code related fault data including faults caused by network connectivity and component interface related failures.

Typical Event Log data:

- Error Code Data
  - Event Time & Date Stamp
  - Error Code Number
  - Error Code Description
  - Odometer
  - Hours
  - Motor Current*
  - .Input Line Current*
  - Input line voltage*
  - Buss Voltage*
  - OEM Factory only data
- Other Network Connectivity & Component Interface failure data

  * machine dependent parameter.

Removing Error Codes:

Unlike the Error Log used on P10, P20, and P30, you cannot manually delete (clear) error codes from the Event Log.

Error Log & Event Log

About

The **Error Log** and **Event Log** information displays contain a historical record of triggered Error Event Codes and related information. The Error Log and Event Log are similar displays used on different console models. The P10, P20, and P30 use the Error Log display and the P62, P80, and P82 use the Event Log.

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Accessing the Error Log & Event Log

Access either the Error Log or Event Log for your particular console:

P10, P20, and P30: access **Information Display** (6,5) > select **Error Log**.

> **TIP**: Deleting Error Codes from the Error Log: Press and hold the **PAUSE/RESET** key for a minimum of 6 seconds to open the Error Log and view all logged error codes. If there are no logged error codes, the "Stuck Key" message will show. To remove error codes, select the error code and press/hold the **QUICK START** key until the "NO ERRORS" message shows.

P62, P80, and P82: Access **Hardware Validation** (5,1,7,6,5,7,6,1) > select **About > CPA**[1] **Event Log**

> **Note**: Unlike the Error Log, error codes cannot be manually removed from the CPA Event Log.

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[1]Control Processing Assembly

Using the Error Log & Event Log

Error Log

Each logged error event code will be shown on the console message display. The individual data parameters will scroll across the display. Use the Up/Down keys to scroll thru and view the individual error codes.

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  * machine dependent parameter.

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  - Error Code Number
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  - Hours
  - Motor Current*
  - .Input Line Current*
  - Input line voltage*
  - Buss Voltage*
  - OEM Factory only data
- Other Network Connectivity & Component Interface failure data

   * machine dependent parameter.

Removing Error Codes:

Unlike the Error Log used on P10, P20, and P30, you cannot manually delete (clear) error codes from the Event Log.

Active Status Light (ASL)

About

 The Active Status Light (ASL[1]) is a service and maintenance status light located at the rear of the EFX on the lower right side of the right drive housing cover.The ASL provides a visual indication of the machine operational status. The current implementation supports four states: 1) Solid blue - indicates normal operation, 2) pulsing blue - indicates preventative maintenance is required; 3) Solid yellow - indicates an error has occurred but the machine is useable; and 4) pulsing yellow - indicates a loss of major function was detected. The ASL also functions as the ASL "Wakeup" switch used to temporarily power-on the ASL and as a shortcut method to clear error states. The ASL also functions as the ASL "Wakeup" switch used to temporarily power-on the ASL and as a shortcut method to clear error states.

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[1]Active Status Light: Service and maintenance status light.
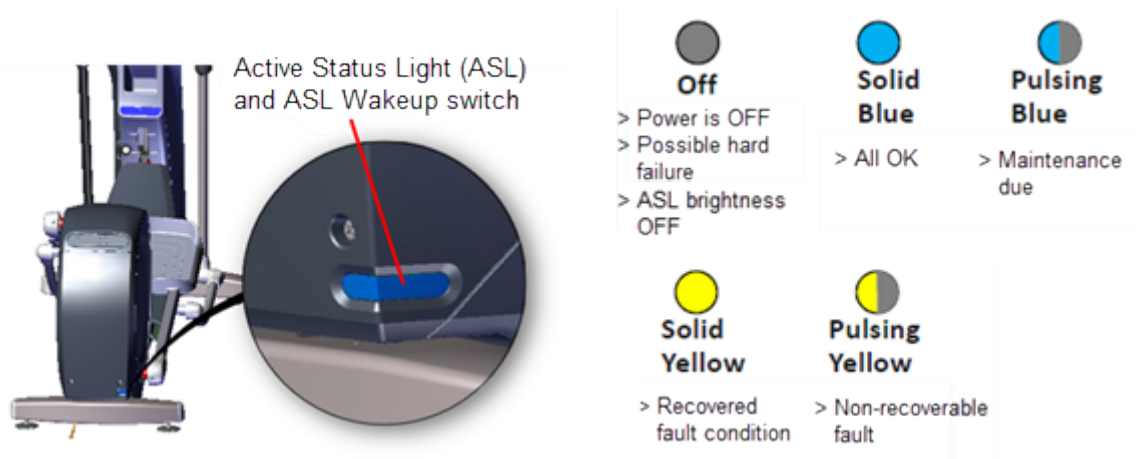
ASL Overview

- An externally visible indicator of the current machine operational status. There are four supported states: 1) solid blue - indicates normal operation, 2) pulsing blue - indicates preventative maintenance is required; 3) solid yellow - indicates an error has occurred but the machine is useable; and 4) pulsing yellow - indicates a loss of major function was detected.

- When either the exerciser starts pedaling or when the ASL Wakeup switch (ASL light cover) is pressed, the ASL light will power-on and start indicating the current machine ASL status. The ASL light will remain ON while the machine is being used (pedaled) and will switch OFF after 90 seconds of non-use (no pedaling).

- Because only one status color and state can be shown at a time, the condition states are prioritized as follows from lowest to highest: Blue Solid (lowest), Blue Pulsing, Yellow Solid, Yellow Pulsing (highest). Higher priority states are always shown before a lower priority state, until cleared.

- The console UPCA[1] determines the ASL state using inputs from the error log and maintenance counter. During active operation (workout in progress) or during the pause state, the console transmits the ASL state to the lower control board (LPCA[2]).

- Only direct error code and maintenance counter data is used to determine the current machine ASL state. No special algorithms (e.g., user behavior) are utilized to determine the status.

- Similar to other self-powered products, the lower control board (LPCA) powers OFF between usage.The power-on and power-off of the ASL are under control of the LPCA at all times. The console cannot control power-on or power-off. The LPCA powers ON when the user pedals above the minimum RPM and for one minute after stopping, and powers ON for 90 seconds when the Wakeup switch is pressed.

- Error code operation: A logged system error code will cause the ASL to begin pulsing yellow. If the error self-corrects, the ASL will change from pulsing to solid yellow.

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[1]Upper PCA board
[2]Lower PCA board

Depending on the error code type, after the end of a workout, the solid yellow light will either revert back to blue (or pulsing blue), or require the operator to do a manual reset from the service menu.

- Maintenance counter operation: The counter starts at 250 hours and counts down the hours of active use to 0 hours. When the counter reaches zero, the ASL will begin pulsing blue indicating preventative maintenance is due.

- Viewing the ASL light

  ○ When in active use with exerciser striding.

  ○ When the exerciser presses the Wakeup switch located on the rear of the unit.

  ○ For 90 seconds after the exerciser ceases striding.

  ○ For 90 seconds after the Wakeup switch is pressed.

ASL States

The ASL utilizes a combination of blue and yellow lights to indicate the current operational machine status.

Off
> Power is OFF
> Possible hard failure
> ASL brightness OFF

Solid Blue
> All OK

Pulsing Blue
> Maintenance due

Solid Yellow
> Recovered fault condition

Pulsing Yellow
> Non-recoverable fault

ASL State	DESCRIPTION
OFF	The unit is powered OFF or there is no power to the LPCA or some other hard failure. On P10, P20, and P30 consoles the ASL brightness is set to OFF.
Blue Solid	Normal operation Indicates that the ASL has not detected any logged error codes.
Blue Pulsing	Preventative maintenance reminder. Treadmills: A belt rating of 0 or 1 will cause a blue pulsing ASL light indicating that there is a problem with the running belt/deck and is in need of servicing or replacement. Ellipticals: The maintenance counter starts at 1000 hours and counts down the active use hours to 0. When the counter reaches zero hours, the ASL will begin pulsing blue indicating preventative maintenance is due.
Yellow Solid	Indicates an error has occurred, was self-corrected and the machine can be used. The fault can be cleared.

ASL State	DESCRIPTION
Yellow Pulsing	There is a current non-recoverable fault condition, there is a loss of a major function and the machine is out-of-service. Machine service is required.

ASL Functions

Setting the ASL light brightness level

The ASL Light Brightness level settings are HIGH, MEDIUM, and LOW. On P10, P20, and P30 consoles, the light brightness level can be switched OFF.

- On P10, P20, and P30 consoles, the OFF setting switches the ASL light brightness OFF for all ASL state conditions. Setting the ASL Light Brightness OFF only switches the ASL light brightness OFFand not the ASL active status functionality.
- Regardless of the brightness level setting (including OFF), you can view the current ASL state (blue, yellow, etc) in the service access menus, see "Viewing the current ASL state" on the facing page.

P10, P20, and P30 consoles:

Access **Hardware Validation** (5,1,7,6,5,7,6,1) > **AS LIGHT BRIGHTNESS** > select **HIGH**, **MED**, **LOW**, or **OFF.**

P62, P80, and P82 consoles:

Access **Club Settings** (5,6,5,1,5,6,5) > **Maintenance** menu > **AS LIGHT BRIGHTNESS** > select **HIGH**, **MED**, or **LOW.**

Disabling the ASL Maintenance Reminder

When set to ON, the ASL maintenance reminder - pulsing blue light state is triggered ON when the maintenance counter counts down to zero miles (or zero hours). When set to OFF, the ASL Maintenance Reminder counter is ignored and the ASL state is not changed to pulsing blue.

- The "OFF" setting effectively disables the ASL "blue pulsing" state without affecting the yellow or pulsing yellow fault states.
- When set to OFF, the Maintenance Reminder counter continues counting down the miles (or hours) remaining which can be viewed in the service access menu, see "Viewing the current ASL state" on the facing page.
- Error code events will still affect the ASL state condition even when the Maintenance Reminder is set to OFF.

P10, P20, and P30 consoles:

Access **Club Settings (5,6,5,1,5,6,5)** > **MAINT CONFIG** > select **ON** or **OFF.**

P62, P80, and P82 consoles:

Access **Club Settings** (5,6,5,1,5,6,5) > **Maintenance** menu > **Maintenance Reminder** > select **ON** or **OFF.**

Viewing the current ASL state

The current ASL state (solid blue, pulsing blue, solid yellow; or pulsing yellow) can be viewed using the service menu **ACTIVE STATUS LIGHT** parameter.

P10, P20, and P30 consoles:

Access **Hardware Validation (5,1,7,6,5,7,6,1)** > **ACTIVE STATUS LIGHT** > current ASL state.

P62, P80, and P82 consoles:

Access **Club Settings** (5,6,5,1,5,6,5) > **Maintenance** menu > **ACTIVE STATUS LIGHT** > current ASL state.

Viewing the ASL maintenance counter remaining miles (or hours)

The maintenance counter remaining miles or hours to zero can be viewed in the service menu.

P10, P20, and P30 consoles:

Access **Information Display (6,5)** > **MAINT COUNTER** > remaining miles (or hours_ to zero.

P62, P80, and P82 consoles:

Access **Club Settings** (5,6,5,1,5,6,5) > **Maintenance** menu > **Next Maintenance Due** > remaining miles or hours to zero.

Clearing the Blue Pulsing ASL State (Maintenance Counter reset)

Resetting the maintenance counter clears the ASL blue pulsing state and resets the ASL state to solid blue.

P10, P20, and P30 consoles:

1. Access **Information Display (6,5)** > select **MAINT COUNTER > OK.**
2. Press/Hold the **QUICKSTART** key, the "HOLD TO RESET MAINTENANCE COUNTER" message will show, continue holding down **QUICKSTART** for 3 sec until the maintenance counter is reset to [[[Undefined variable TRM700-16Base.MaintCounter]]].

P62, P80, and P82 consoles:

Access **Club Settings** (5,6,5,1,5,6,5) > **Maintenance** menu > **Next Maintenance Due** > **Reset.**

Clearing the Yellow & Yellow Pulsing ASL states

An ASL pulsing yellow state is triggered when an error code event occurs and is logged. To clear a pulsing yellow state, the error condition causing the ASL pulsing yellow must first be resolved either manually or the machine may resolve and self-clear the issue. A manually or machine self-cleared error code will change the ASL state from pulsing yellow to the solid yellow state.

Clearing the pulsing yellow ASL state

An ASL pulsing yellow state is triggered when an error code event occurs and is logged. To clear a pulsing yellow state, the error condition causing the ASL pulsing yellow must first be resolved either manually or the machine may resolve and self-clear the issue. A manually or machine self-cleared error code will change the ASL state from pulsing yellow to the solid yellow state.

Clearing the solid yellow ASL state

P10, P20, and P30 consoles:

On P10, P20, and P30 consoles, clearing the error code from the Error Log resets the ASL state from solid yellow to the solid blue state.

P62, P80, and P82 consoles:

1. On P62, P80, and P82 consoles, the **Maintenance** > **Operating Condition** parameter must be reset from the **Inspect** condition to the **Normal** condition. After resetting the Operating Condition to Normal, the ASL state will change from solid yellow to the solid blue state.

2. Then go to the **CPA**[1] **Event Log** and clear the error code by selecting the **Clear** control.

   Note: Clearing the CPA Event Log does NOT clear the error codes from the Event Log.

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[1]Control Processing Assembly

System Troubleshooting Procedures

System Troubleshooting procedures provide information and procedures to help you troubleshoot and repair elliptical issues.

Available Troubleshooting Procedures

- "Blown Battery FuseTroubleshooting" on the next page

See Also

Troubleshooting

"Standard Error Codes" on page 125

"Error Log & Event Log" on page 131

Blown Battery FuseTroubleshooting

Use this procedure to help troubleshoot a failed "blown" battery fuse.

Main battery fuse failure

An indication that the battery fuse has failed is that the machine will operate as normal except that the incline lift function does not operate,

1. Remove the main battery fuse from the inline fuse inline holder and verify condition. Use an ohm meter to verify that there is continuity (zero ohms) between the two fuse connection pins.

    a. If the fuse is good, replace the removed fuse.

    b. If the fuse is bad. replace the fuse.

2. Make sure the battery is charged and properly connected,see "Battery Replacement" on page 44..

3. Make sure that the battery positive and negative cables are installed correctly and securely connected at both ends of the battery power cable.

4. Switch the power ON. Verify that the machine power has been restored. Wait for a few minutes and make sure the fuse does not fail again.

    a. If the fuse fails after power up, the fuse is not causing the power failure, continue troubleshooting the cause of the electrical power failure.
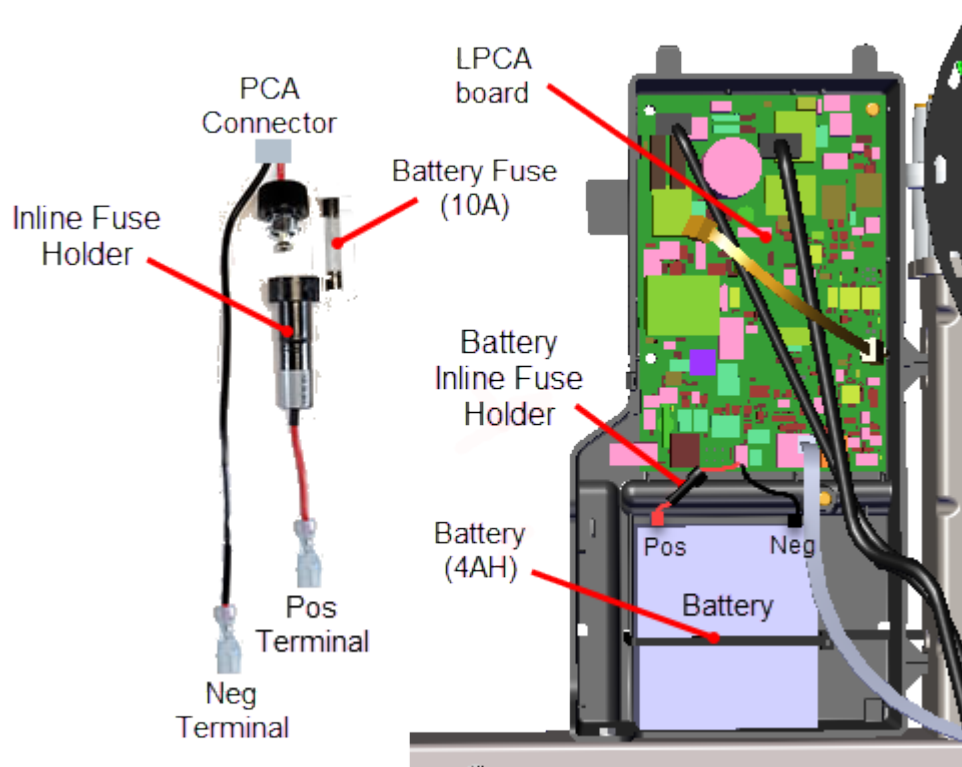
See Also

8   Preventive Maintenance

About

Preventative maintenance is proven to extend the life of the equipment, improve the user experience, and keep maintenance problems and service calls to a minimum. Precor recommends the following preventative maintenance schedule.

> **IMPORTANT**: It is the responsibility of the owner to maintain equipment in accordance with the Precor recommended preventative maintenance schedule. Always purchase replacement parts and hardware from Precor. If you use parts not approved by Precor, you could void the Precor Limited Warranty. Use of parts not approved by Precor may cause injury.

Additional Services

Precor offers a subscription Preventative Maintenance Program, see Preventative Maintenance Program.

Maintenance Schedule

Preventative maintenance tasks are grouped into Daily, Weekly, Monthly, Quarterly, and Semi-annual scheduled maintenance tasks. Do all tasks for each scheduled time period.

> **IMPORTANT**: If you determine that the equipment needs service, disconnect all power connections (television, Ethernet, and power) and move the equipment away from the exercise area. Place an OUT OF SERVICE sign on the equipment and make it clear to all patrons and other users that they must not use it.

Daily Maintenance

Perform the following maintenance tasks daily:

Daily Task	Description
☐ Clean the equipment exposed frame and plastic components.	Clean the equipment exposed frame and plastic components with a soft cloth that you have moistened with water on an approved cleaning solution, see "General Information" on page 3. Keep excess moisture away from electronic components to avoid electrical shock and/or damage to the unit. Dry unit completely.
☐ Clean the LED/LCD/LCD consoles	On LED display consoles, clean with a damp lint free cloth using water (or 1oz mild cleaner to 30 oz water) and wipe dry. On LCD, Touchscreen, or PVS display consoles, clean with a damp lint free cloth using ONLY a diluted solution of one part 91% Isopropyl

Daily Task	Description
	Alcohol to one part water and wipe dry.
☐ At least once every day, examine the machine for loose, worn, or damaged parts	Verify the machine for the following possible issues: • Loose fasteners and/or parts. • Unusual noises • Worn or frayed power cords. • Worn, damaged, missing safety lanyards or clips. • Any other indication that the equipment may be in need of service. ***Important***: If you determine that the equipment needs service, disconnect all power connections (television, Ethernet, and power) and move the equipment away from the exercise area. Place an "OUT OF SERVICE" sign on the equipment and make it clear to all patrons and other users that they must not use it.
☐ Clean CrossRamp track and rollers.	Clean the CrossRamp, rollers, and track surfaces.

Weekly Maintenance

Perform the following maintenance tasks every week.

Weekly Task	Description
☐ Do the Daily maintenance tasks.	Do the Daily maintenance tasks in addition to the following Weekly maintenance tasks.
☐ Vacuum and clean floor area underneath equipment·	Vacuum and use damp mop to clean floor area underneath equipment. Make sure the floor is completely dry when finished
☐ Verify unit sits level and solid on floor	Use a bubble level placed on running belt to verify level. All feet should be touching the floor and the unit should not rock or wobble when in use.
☐ Verify console and machine operation including the Heart Rate feature:	Perform the *Operation Verification* procedure to verify console and machine operation, see "Operation Verification Tests" on page 11.

Monthly Maintenance

Perform the Daily and Weekly task in addition to the following monthly maintenance tasks.

Monthly Task	Instruction
☐ Do the Daily and Weekly maintenance tasks	Do the Daily and Weekly maintenance tasks in addition to the following monthly maintenance tasks.
☐ Clean inside the rear Input	Remove the rear Input Drive Housing covers and vacuum

Monthly Task	Instruction
Drive Housing.	out any debris. Be careful not to bring the vacuum cleaner nozzle too close to any PCA circuit board which could be damaged by ESD. It is recommended to use a vacuum cleaner that is protected against electrostatic discharge). Use rag to wipe and clean dust and dirt from components.
☐ Verify the First and Second Stage belt tension.	Verify the First and Second Stage belt tensions, see "First Stage Drive Belt Tension Adjustment" on page 32 and ."Second Stage Drive Tension Adjustment" on page 36
☐ Clean and lubricate the lift motor jackscrew (Inline models only).	Clean and lubricate the lift motor jackscrew with an approved grease, see"General Information" on page 3.
☐ Inspect visible welds, frame, and wire connections[1].	Do a visual check of welds and frame. Check for loose wire connections.
☐ Perform the Operation Verification tests to verify machine features and operation.	Do the Operation verification procedure and return to service, see "Operation Verification" on page 11.

9 Theory of Operation

About

What's New

The EFX800-16 has incorporated many new updates from previous generation EFXs including:

- New Lower PCA board (LPCA[1]) design
- Different generator/brake system, changed to a generator/brake system similar to that used on the AMT machines
- Smaller battery and improved battery charging/maintenance system
- Faster CrossRamp lift speed (2x)
- Added a service/maintenance Active Status Light (ASL[2])

Operating Summary Information

Power-up Initialization State

When the user begins pedaling at speed greater than minimum, 40 strides per minute the lower circuit (LPCA) powers up and delivers power to the console, and all systems initialize.

The LPCA will remain on under battery power until the pedal speed drops below the minimum, at which time the system enters Pending Shutdown state.

Banner Default State

When the user begins pedaling at speed greater than minimum, 40 strides per minute the lower circuit (LPCA) powers up and delivers power to the console, and all systems initialize.

The LPCA will remain on under battery power until the pedal speed drops below the minimum, at which time the system enters Pending Shutdown state.

- Exercise program is the manual program.
- Goal type is time.
- Goal value is the club time limit.
- All other exercise program parameters revert to default values appropriate to the specific exercise program.
- Weight is 170 pounds or 77 kilograms.
- Age, gender, target heart rate and fitness score are unknown.

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[1]Lower PCA board
[2]Active Status Light: Service and maintenance status light.

- Units, language, and optional metric are read from EEPROM, as set by Owner Settings. Factory defaults for these are U.S., English, and no optional metric.

When the machine returns to Banner state after an exercise session ends, the following accumulated session data is stored in memory until the system goes through the Initialization state, or until the next user performs data entry.

- Session program.

- Session total time, including cool-down time.

- Session total distance, including horizontal, vertical, strides, revolutions, equivalent distances, etc.

- Session total calories.

- Average speed.

- Average heart rate, max heart rate, and total time spent in a heart rate zone.

- Weight, age, gender, target heart rate, parameters related to interval course profile, and fitness score.

System Component Overview

The EFX800-16 is comprised of two basic system blocks, the console and the base. The console provides the user input controls, metric indicator displays, and console-to-base communication interfaces. The console also provide the service software menus including maintaining the Error Log menu. The base receives machine operating commands and executes them. The base also monitors error conditions and sends detected error code data to the console.
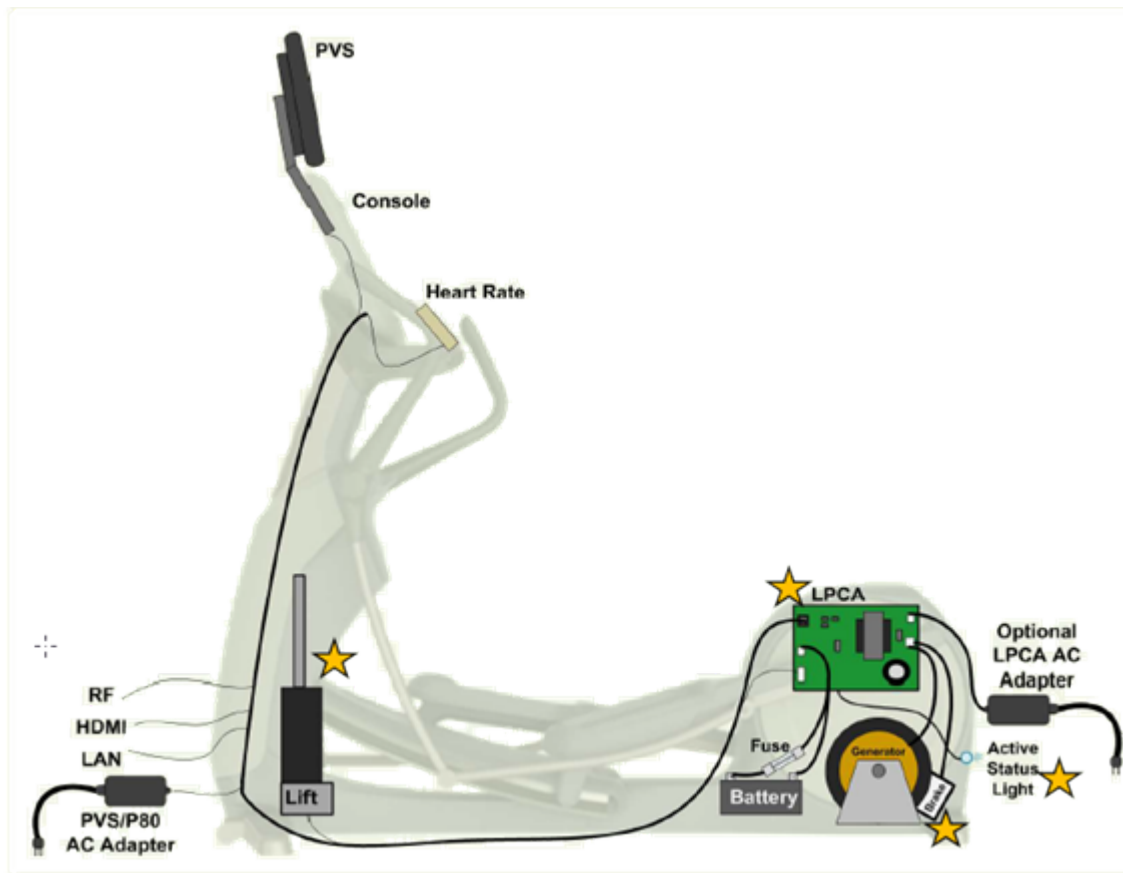
Console

The console provides the user interface operational control inputs, the metric indicator information, and the console-to-base communication interface. The console Upper PCA board (UPCA[1]) sends the input control commands to the base Lower PCA board (LPCA). The console also receives error code data from the base which is used to maintain the Error Log service menu. The console also controls and sends the ASL[2] status state (based on the received error codes) to the base.

The LPCA makes use of two main processors: the Master (also referred to interchangeably as "Major") and Slave (also as "Minor").

Base

The base Lower PCA (LPCA[3]) receives machine control commands from the console and directly executes the commands to control the braking, lift operation, and power ON/OFF. The LPCA also monitors error conditions and sends the detected error event code information to the console.

---

[1]Upper PCA board
[2]Active Status Light: Service and maintenance status light.
[3]Lower PCA board

The LPCA makes use of two main processors: the Master (also referred to interchangeably as "Major") and Slave (also as "Minor").

Communication Interface Cable

Console **UPCA**[1] to base LPCA communication interface cable wiring diagram.
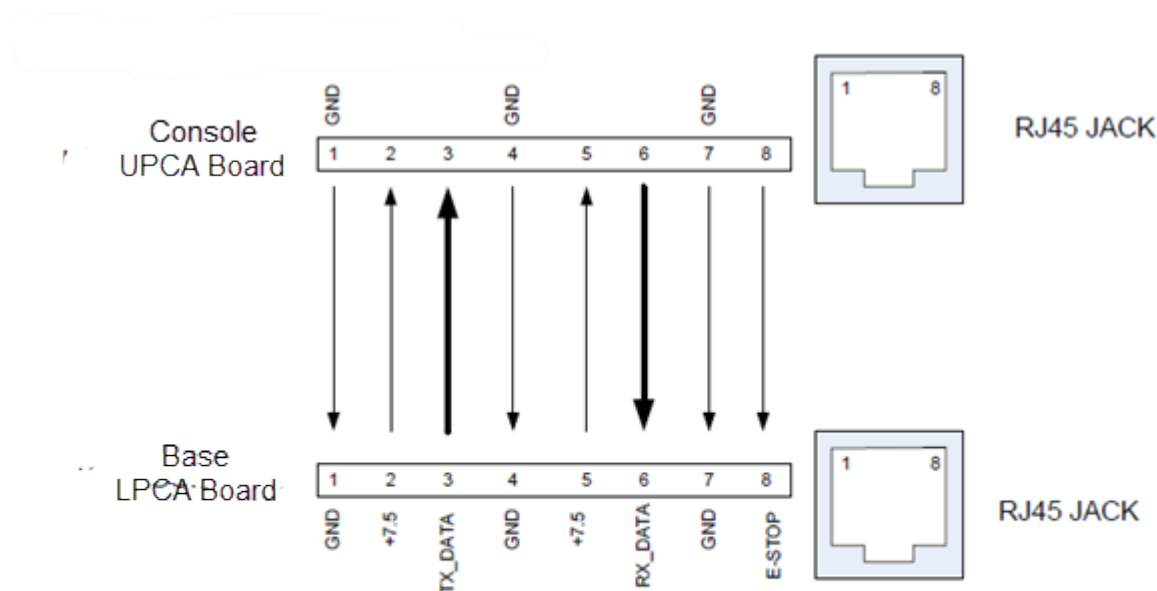
- TX and RX ----- 9600 baud, 8 data bits, 1 stop bit, no parity
- TX and RX signals are TTL (5 volt) levels, with 0V (start bit) to 5V (stop bit) range
- Power is provided by the Lower Control Board
  - +7.5 VDC +/- 5%
  - 1.5 amps

Generator/Brake system

The EFX800-16 base generator/brake system has changed from previous generation EFXs and now uses a generator/brake system similar to the AMT machines..

Active Status Light (ASL)

Active Status Light: similar to Treadmill ASL, except that operation has been changed for self-powered machines. A separate microprocessor and software on the LPCA control the color and flashing of the LED. A button near the light is used to wake up the entire system temporarily to check its color, and to clear the status color if pressed long enough. Active Status Light processor receives simple commands from the Console, see Active Status Light (ASL).

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[1]Upper PCA board

System Wiring Diagram
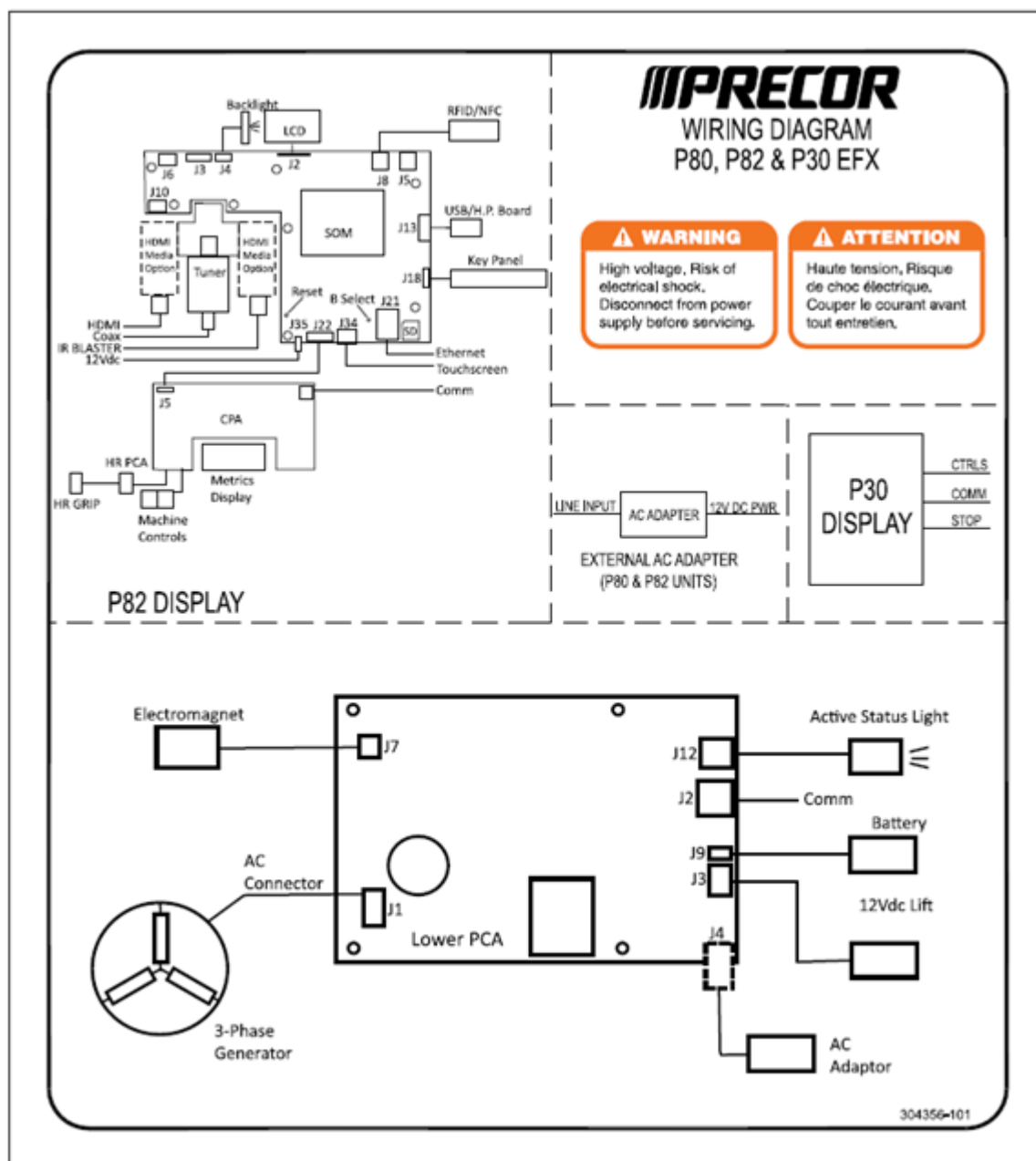
10   Exploded View Diagram & Parts List

About

The following copies of the equipment *Exploded View Diagram* and *Parts List* are provided for you to use as a quick reference.

It is recommended that you go to the servicer partners 🌐 Precor Connect (or Precor Connection) website to view the most current parts information including the *Exploded View Diagram* and *Parts Identification List*.

🌐 Precor Connect Partner website

> ⚠️ **IMPORTANT**: Always purchase OEM replacement parts and hardware from Precor. If you use parts not approved by Precor, you could void the Precor Limited Warranty. Use of parts not approved by Precor may cause injury.

Exploded View Diagrams and Parts LIst

Exploded View Diagrams

Exploded View Diagram - Fixed Arm Models

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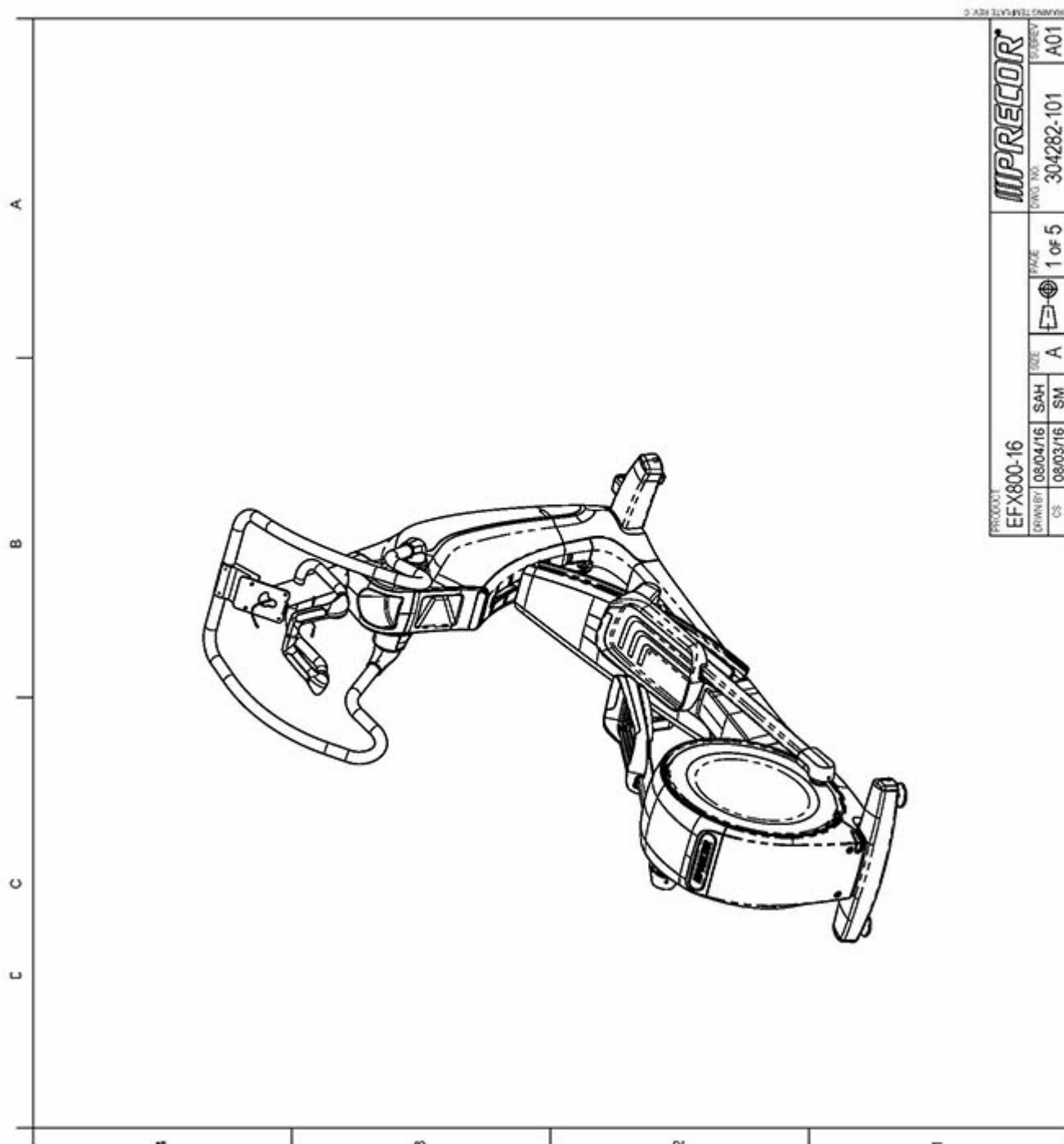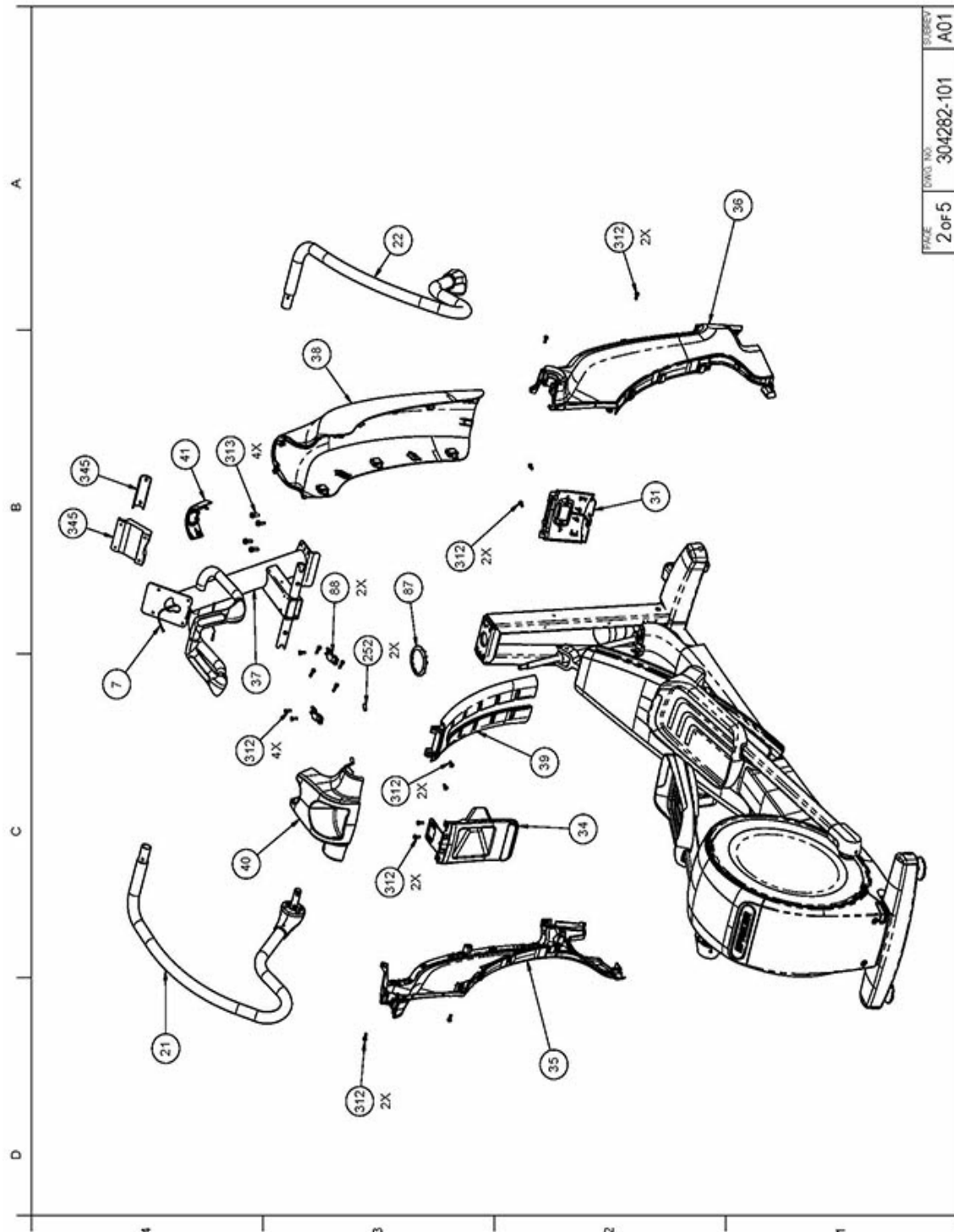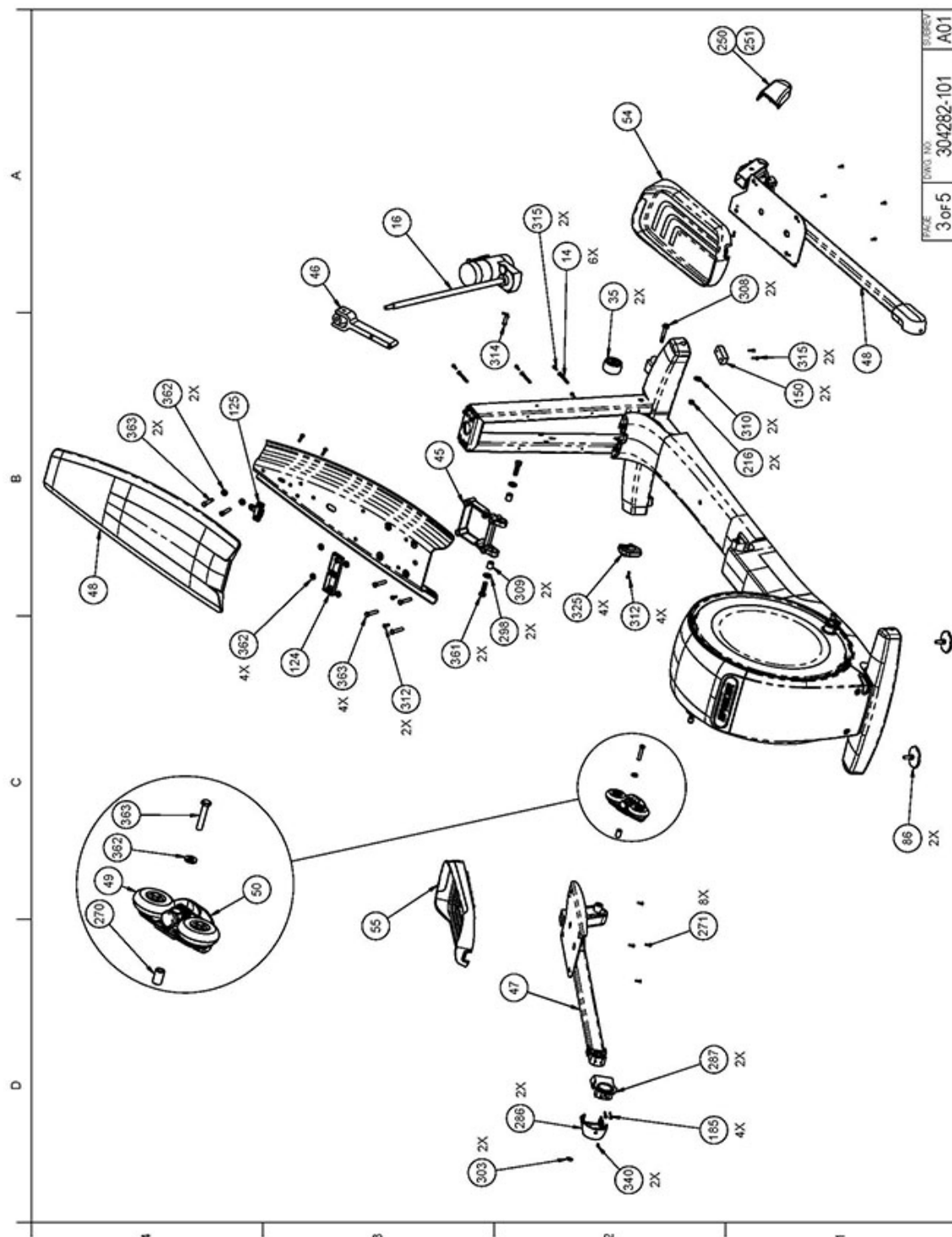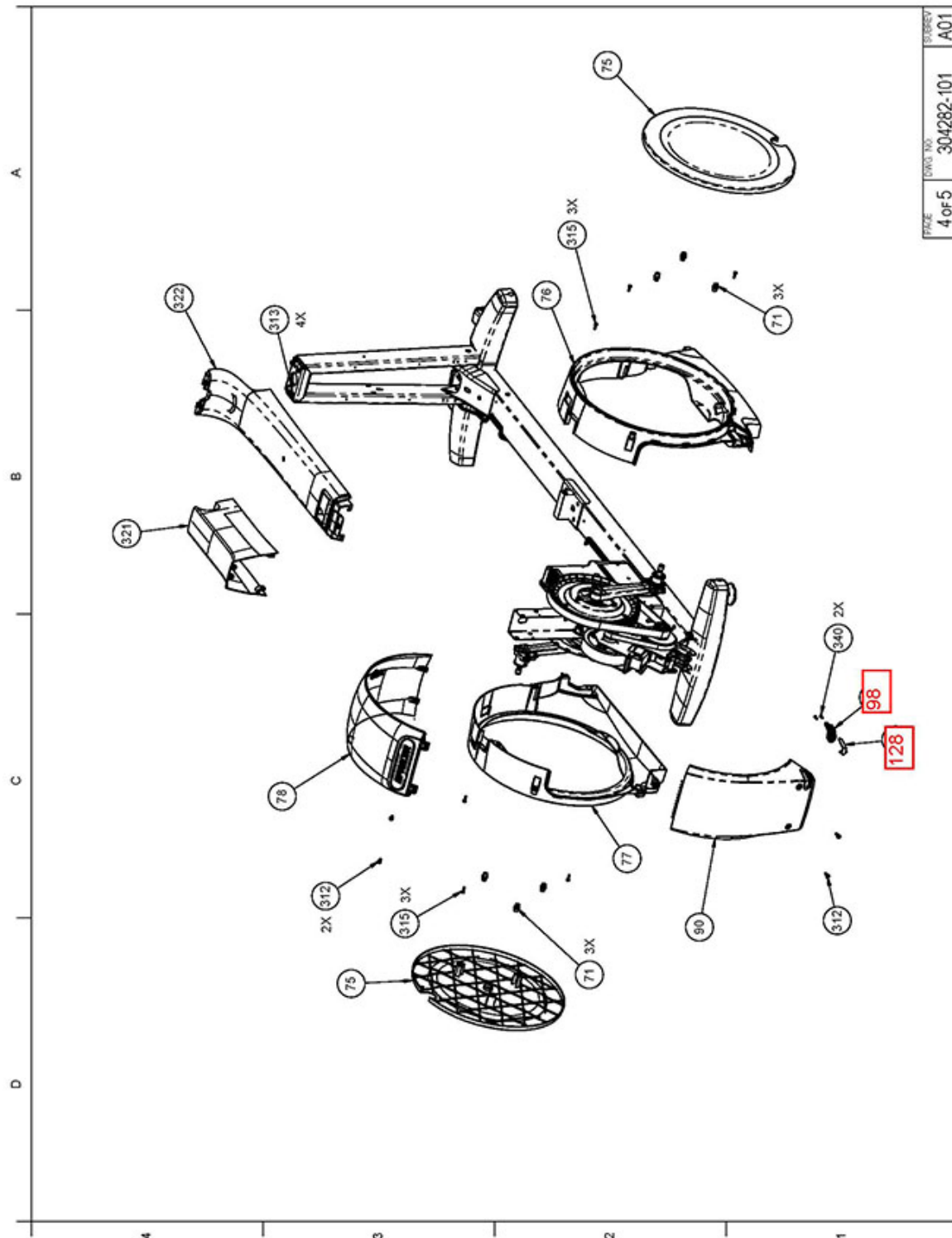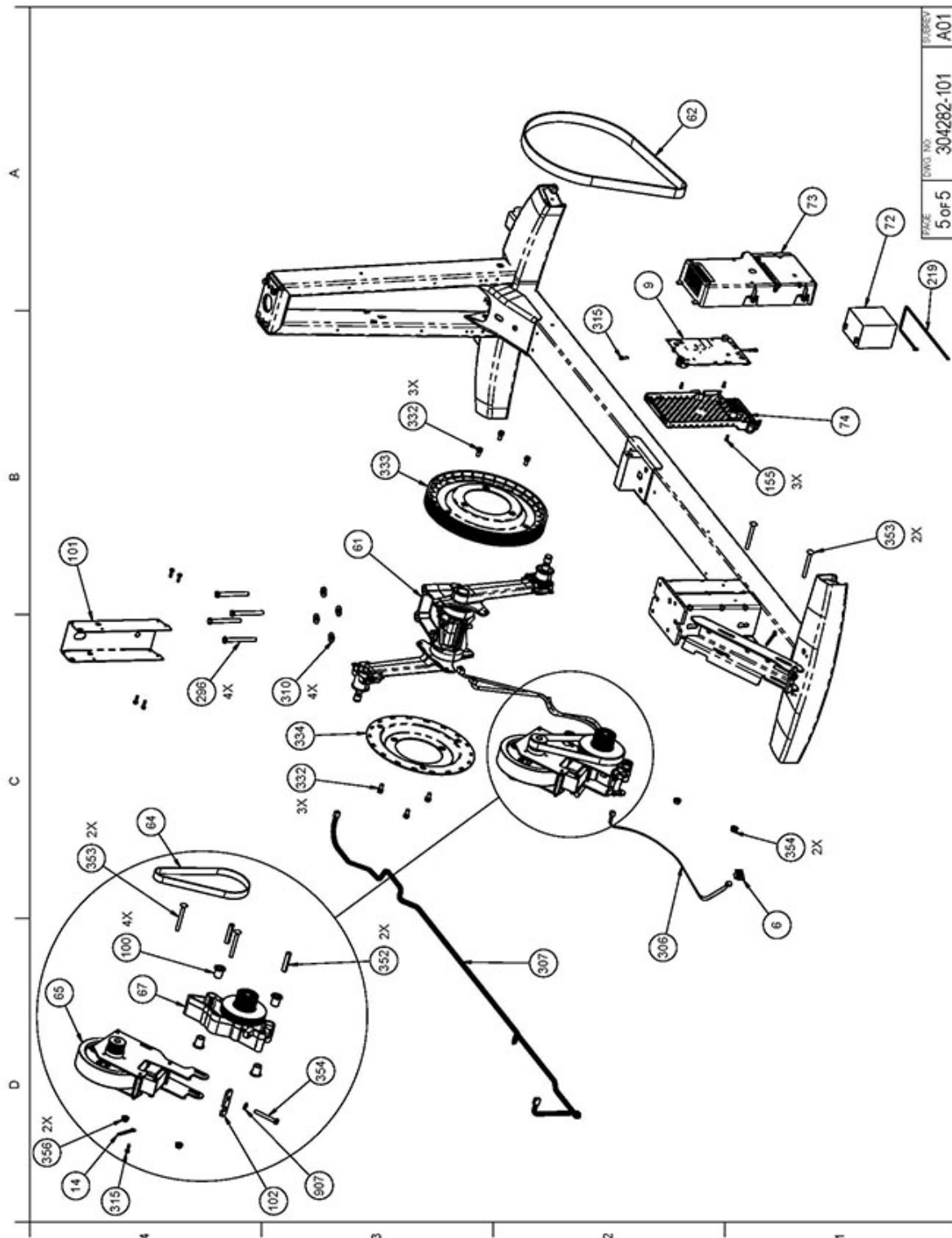
Exploded View - Moving Arms Option

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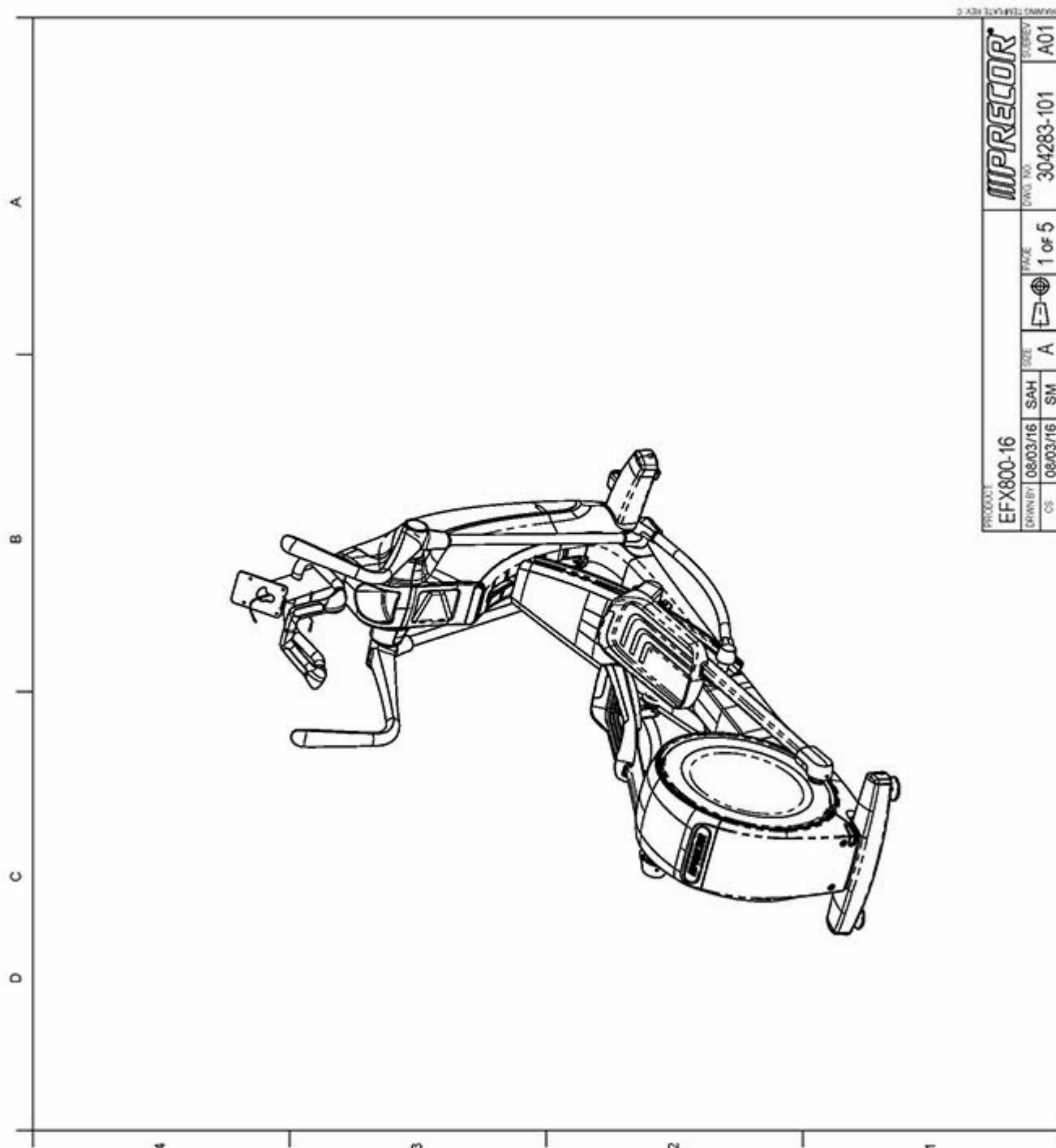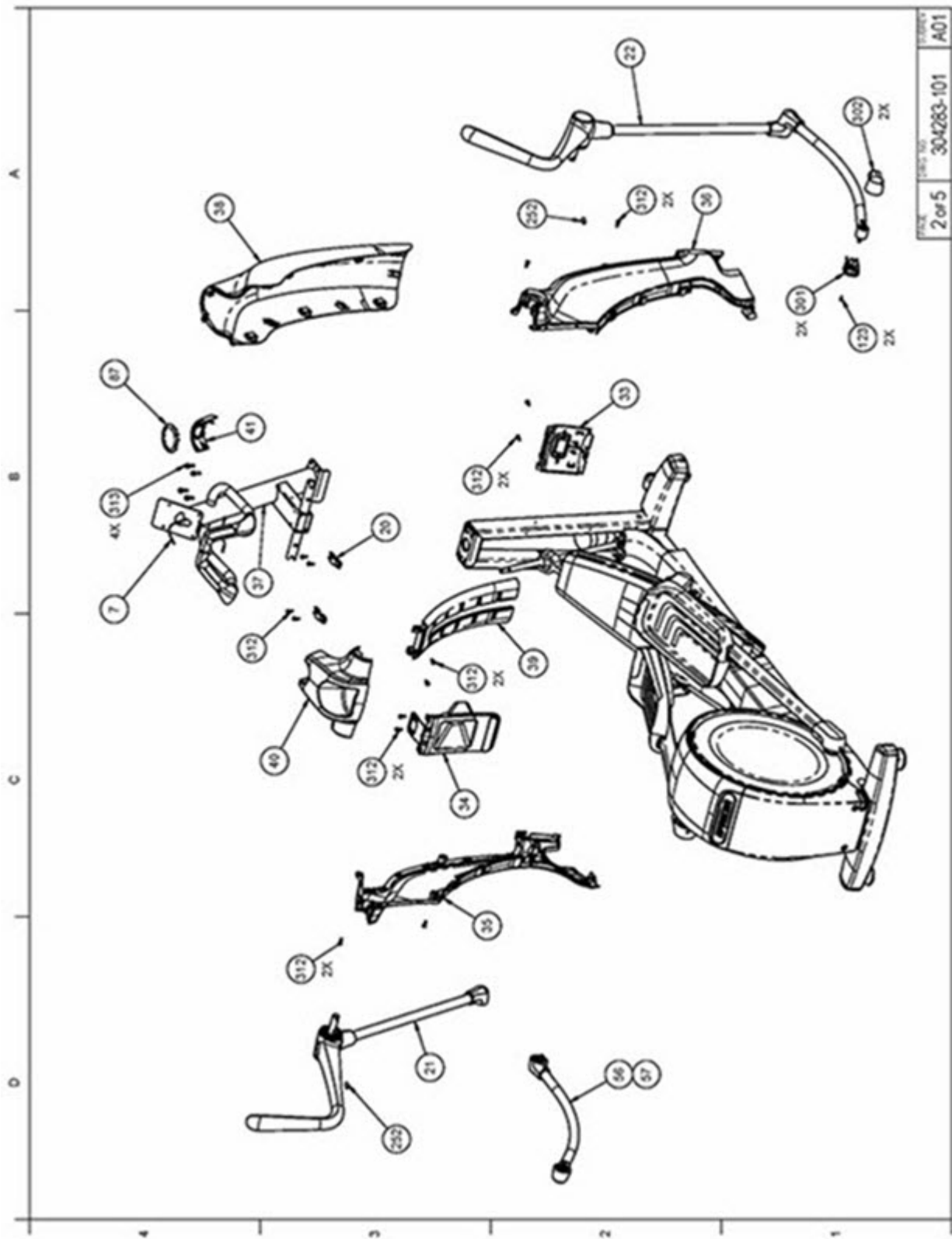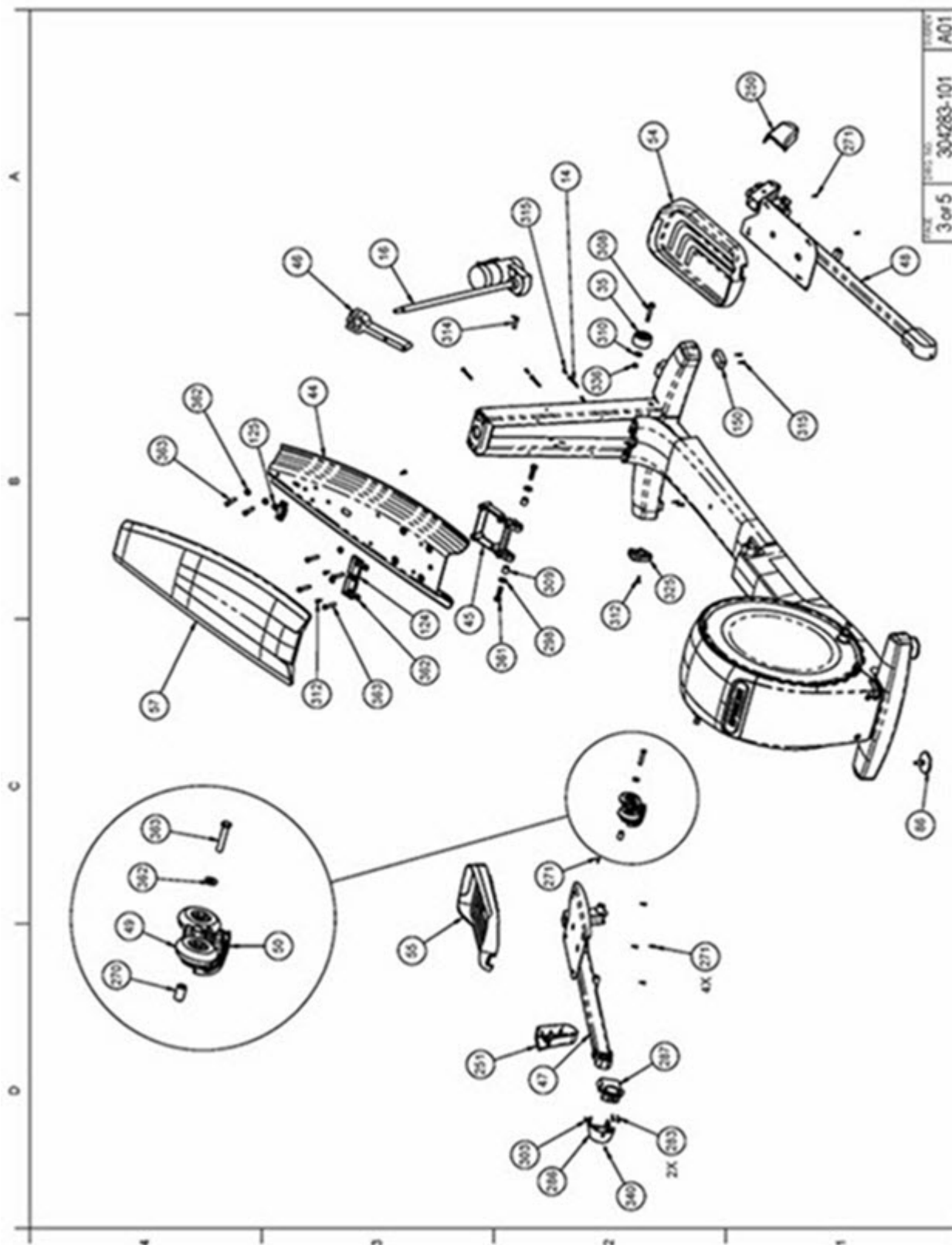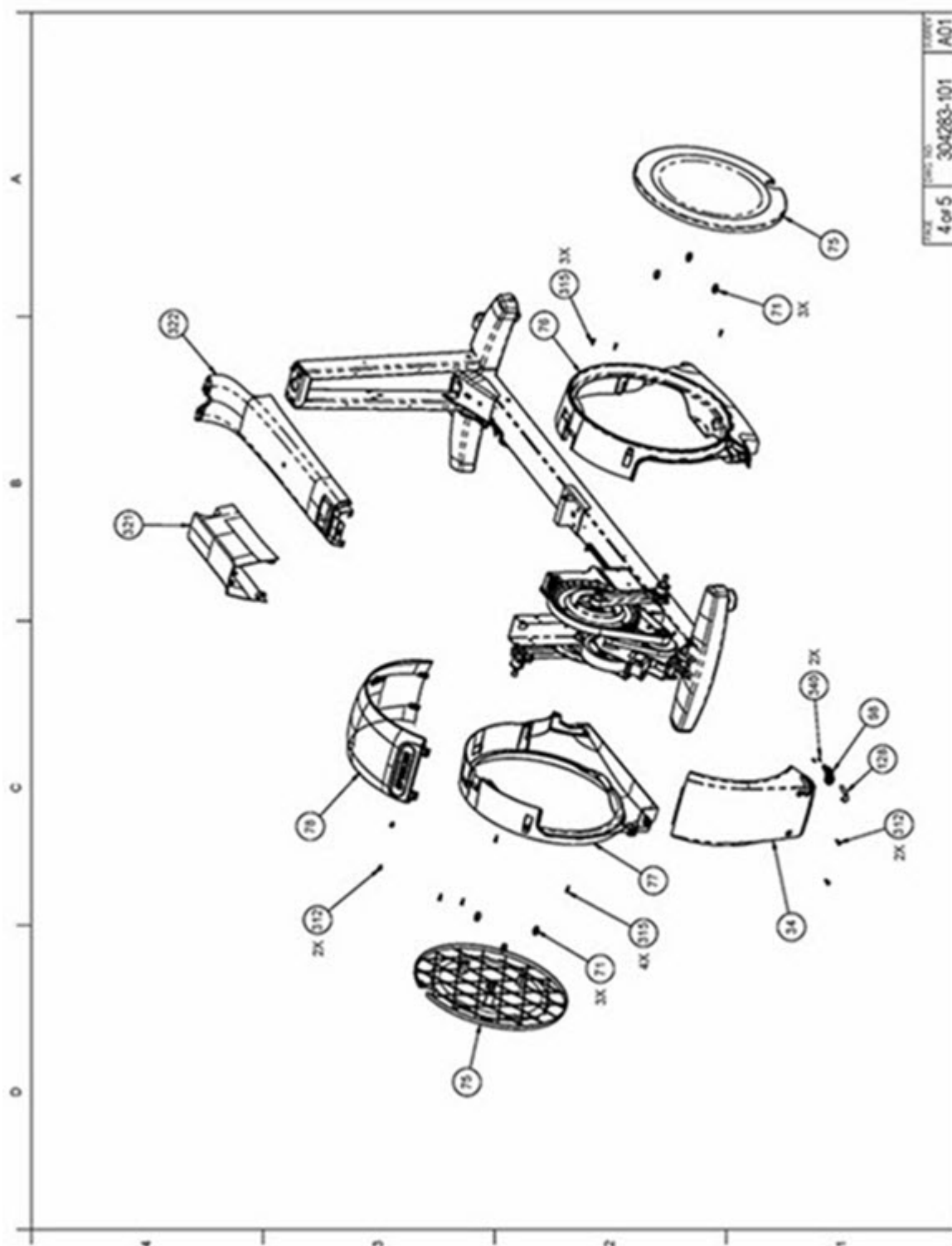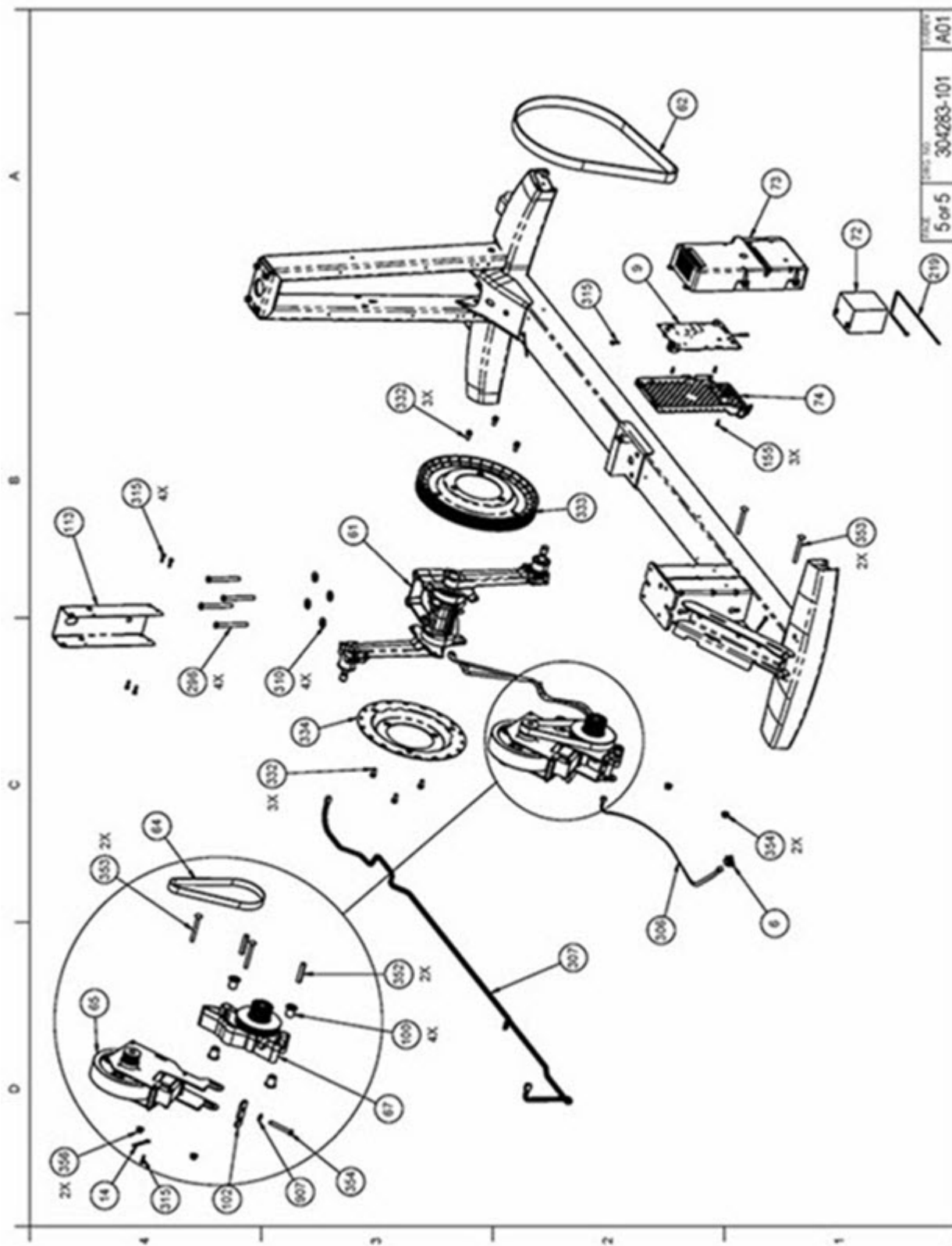
Parts LIst

Parts List - Fixed Arm Models

Parts list - EFX800 Fixed Arm Models

Bubble Numbers	Item Description	SAP Material #
6	PCA, ACTIVE STATUS LIGHT, SPAM, 4 LED	PPP000000304016403
7	ASSY,CBL,MOD,8P8C,1-1,SILVER,130"	PPP000000044905130
9	ASSY, LPCA & SW, EFX800-16	PPP000000304079106
14	WIRE CLAMP, .25 INCH FASTENER, METAL WRAP STYLE	PPP000000013217101
16	ACTUATOR, LIFT,SELF POWERED EFX, W/O NUT (ROHS)	PPP000000303324102
20	MANTIS - UPPER PIVOT ANCHOR	PPP000000303456101
21	ASSY, FIXED HANDLEBARS, LH	PPP000000303460101
22	ASSY, FIXED HANDLEBARS, RH	PPP000000303460102
30	ASSEMBLY, UPPER HHHR CONTACT WITH CARRIER	PPP000000303502101
31	CONTACT, HHHR LOWER, STAINLESS	PPP000000302414101
32	ASSY, ACCESSORY TRAY & CROSSRAMP BADGE	PPP000000303523101
34	LIFT COVER, INTERFACE PLATE	PPP000000303416101
35	ASSEMBLY, LIFT COVER, LEFT SIDE	PPP000000303541101
36	ASSEMBLY, LIFT COVER, RIGHT SIDE	PPP000000303542101
37	ASSEMBLY, DISPLAY MOUNT WITH HHHR GRIPS	PPP000000303610101
38	LIFT COVER, FRONT, ASSY	PPP000000303507101
39	LIFT COVER, ASSY, REAR	PPP000000303508101
40	LIFT COVER, TOP	PPP000000303409102
44	RAMP, FORMED	PPP000000303562102
45	ASSY, HINGE, RAMP	PPP000000303570101
46	ASSEMBLY, LIFT NUT AND YOKE	PPP000000303563101
49	WHEEL,OVERMOLDED,BLACK	PPP000000048336101
49	WHEEL,OVERMOLDED,BLACK	PPP000000048336101
50	ASSEMBLY, WHEEL TRUCK	PPP000000303550101
50	ASSEMBLY, WHEEL TRUCK	PPP000000303550101
54	FOOT PEDAL, RIGHT, LED BLUE ACCENT	PPP000000303467102
55	FOOT PEDAL, LEFT, LED BLUE ACCENT	PPP000000303467101
60	GASKET, HHHR CONTACT	PPP000000302418101
62.00	BELT, DRIVE, 470J12 POLY V	PPP000000010217148
64	BELT, DRIVE, 240J8 POLY V	PPP000000010217149
65	ASSY, GENERATOR AND EDDY BRAKE	PPP000000303431101
67	ASSY, STEP UP PULLEY AND TENSIONER	PPP000000303433101
71	ASSY,CATCH LATCH AND RECEIVER	PPP000000304313101
72	BATTERY,SLA,12V,4AH,.187 TABS	PPP000000012258040
73	COVER, REAR LPCA MOUNT	PPP000000303624101
74	COVER, LPCA FINGER GUARD	PPP000000303627101
75	COVER, DRIVE DISK	PPP000000303490101
76	ASSY,COVER, DRIVE HOUSING, RH,W/TINNERMAN CLIPS	PPP000000303497101
77	ASSY,COVER, DRIVE HOUSING, LH, W/TINNERMAN CLIPS	PPP000000303493101
79	FUSE,SLOW,10A,32V,1/4 DIA	PPP000000010427151
86	FOOT,ADJUSTING,NO LOGO,WITH LOCK NUT	PPP000000303093101
87	GASKET, NECK	PPP000000303412101
100	ISOLATOR, 7/16 BOLT, TOP HAT	PPP000000303438101

101	ISOLATOR, 5/16 BOLT, TOP HAT	PPP000000303509101
102	PLATE, TENSIONER TUG	PPP000000303432101
102	PLATE, TENSIONER TUG	PPP000000303432101
103	WHEEL, TRANSPORT W/ STEEL BUSHING	PPP000000303671102
105	MANTIS - HHHR COVER, FRONT	PPP000000303457101
106	HHHR COVER, LOWER RIGHT SIDE	PPP000000303459102
107	HHHR COVER, LOWER LEFT SIDE	PPP000000303459101
108	MANTIS - HHHR COVER, REAR	PPP000000303458101
150	FOOT, FIXED	PPP000000031074104
155	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
155	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
155	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
156	ASSY,CBL,16AWG,MINI FIT,QDK,10A SB,9"	PPP000000302130009
159	CONN,QK DISC,TAB,187X032,45DEG,0.199"STUD MOUNT	PPP000000010622064
200	HARDWARE KIT, FIXED ARM, EFX800-16	PPP000000303498102
212	BEZEL, ACTIVE STATUS	PPP000000303475102
213	ROCKER, ACTIVE STATUS LIGHT	PPP000000303528102
216	NUT,PLAIN,HEX,3/8-16,STL,CLR ZN	PPP00000KMCN038034
216	NUT,PLAIN,HEX,3/8-16,STL,CLR ZN	PPP00000KMCN038034
219	CABLE TIE,17 LONG,WHITE,NYL	PPP000000010123116
250	COVER, TRUCK PIVOT, RIGHT	PPP000000303505102
251	COVER, TRUCK PIVOT, LEFT	PPP000000303505101
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
253	SCREW,FLAT HD SOCKET CAP,1/4-20 X .625,STL,CLR ZN	PPP0000MACCN025062
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
270	SPINDLE, PIVOT, WHEEL TRUCK, STAINLESS	PPP000000303511102
270	SPINDLE, PIVOT, WHEEL TRUCK, STAINLESS	PPP000000303511102
271	SCREW,SELF-TAP,TRI,PAN HD PHIL,#10 X 5/8,PLASTITE 48-2,STL,CLR ZN	PPP0000PARCN019063
271	SCREW,SELF-TAP,TRI,PAN HD PHIL,#10 X 5/8,PLASTITE 48-2,STL,CLR ZN	PPP0000PARCN019063
277	CUP, PEDAL MOUNT	PPP000000303521101
277	CUP, PEDAL MOUNT	PPP000000303521101
278	HHCS,3/8-16 X .75,NYLOCK,GR5 STL,CLR ZN	PPP00000HCCE038075
278	HHCS,3/8-16 X .75,NYLOCK,GR5 STL,CLR ZN	PPP00000HCCE038075
278	HHCS,1/2-13 X 1.75,NYLOCK,GR8 STL,CLR ZN	PPP00000HECE050175

279	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
279	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
286	COVER, PIVOT BLOCK OUTER	PPP000000303512101
287	INNER PIVOT BLOCK COVER, STAIRARM	PPP000000303513101
296.00	HHCS,3/8-16 X 4.00,NYLOCK,GR5 STL,CLR ZN	PPP000000013460103
297.00	HFS,3/8-16 X 2.00,NYLOCK,GR5 STL,CLR ZN	PPP000000013516102
298	WASHER,FLAT,NARROW,1/2,GR8 STL,CLR ZN	PPP00000WRCN050010
300	HOOK, WHEEL TRUCK	PPP000000303555101
300	HOOK, WHEEL TRUCK	PPP000000303555101
303	RETAINING RING,EXTERNAL,17.1,ROTOR CLIP P/N SH-66ST PA	PPP00000ABHN017001
306	ASSY,CBL,MOD,6P6C,1-1,24"	PPP000000304128024
307	ASSY,CBL,20AWG,6P5C,MINI-FIT,69"	PPP000000304108069
308	HHCS,3/8-16 X 2.50,SEMS .875 WASHER,NYLOCK,GR5 STL,CLR ZN	PPP0000HAECE038250
309	SPACER, RAMP PIVOT	PPP000000303572102
310	WASHER,FLAT,WIDE TYPA,3/8,STL,CLR ZN	PPP00000WCCN038008
310	WASHER,FLAT,WIDE TYPA,3/8,STL,CLR ZN	PPP00000WCCN038008
310	WASHER,FLAT,WIDE TYPA,3/8,STL,CLR ZN	PPP00000WCCN038008
312	SCREW,FLAT HD SOCKET CAP,1/4-20 X 1.75,STL,BLK SHRP	PPP0000MACTN025175
312	SCREW,SELF-TAP,TRI,PAN HD PHIL,1/4-20 X .75,STL,BLK SHRP	PPP0000PANTN025075
315	SCREW,SELF-TAP,TRI,WASHER HD HEX,10-24 X .75,STL,CLR ZN,ERIELUBE	PPP0000PBDCA019075
315	SCREW,SELF-TAP,TRI,WASHER HD HEX,10-24 X .75,STL,CLR ZN,ERIELUBE	PPP0000PBDCA019075
315	SCREW,SELF-TAP,TRI,WASHER HD HEX,10-24 X .75,STL,CLR ZN,ERIELUBE	PPP0000PBDCA019075
316	HHCS,5/16-18 X 1.00,SEMS NARROW WASHER,NYLOCK,GR5 STL,CLR ZN	PPP0000HAECE031100
321	COVER, RAMP TO DRIVE TRANSITION	PPP000000303492101
322	FRAME COVER, FORWARD	PPP000000303454101
325	END CAP, FOOT	PPP000000303417101
328	WASHER,WAVE,OVERLAP,TRIPLE,.620,STL,SMAL LEY P/N SSR-0087	PPP0000WAGNN062001
329	WASHER,FLAT,.75 X 1.125 X .031,STL	PPP00000WNNN075003
330	COVER, RAMP	PPP000000303413101
332	BOLT, DRIVE LUG	PPP000000303449101
333	ASSY, HCOM EFX INPUT PULLEY	PPP000000303446101
334	PLATE, INPUT PULLEY SUBSTRATE	PPP000000303447101
340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050
340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050
340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050
340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050

340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050
345	BRACKET, FIXED HANDLEBAR MOUNT,PT	PPP000000303465101
345.1	CLAMP, FIXED HANDLEBAR MOUNT,PT	PPP000000303466101
352	SPACER, COILED SHEET, 5/16 ID X .462 OD X 2-1/8 LG, #200450134	PPP000000013305101
353	BOLT,CARRIAGE,5/16-18 X 3.00,GR5 STL,CLR ZN	PPP00000BACN031300
353	BOLT,CARRIAGE,5/16-18 X 3.00,GR5 STL,CLR ZN	PPP00000BACN031300
354	HHCS,5/16-18 X 2.50,FULLTHREAD,GR2 STL,CLR ZN	PPP00000HJCN031250
354	NUT,5/16-18,HEX FLANGE,NYLON INSERT,GR5 STL,CLR ZN	PPP0000KBTCN031038
355	HHCS,5/16-18 X 2.50,FULLTHREAD,GR2 STL,CLR ZN	PPP00000HJCN031250
356	NUT,5/16-18,HEX FLANGE,NYLON INSERT,GR5 STL,CLR ZN	PPP0000KBTCN031038
363	HFS,3/8-16 X 2.00,NYLOCK,GR5 STL,CLR ZN	PPP000000013516102
363	HFS,3/8-16 X 2.00,NYLOCK,GR5 STL,CLR ZN	PPP000000013516102
365	WASHER,EXTERNAL TOOTH LOCK,#10,STL,CLR ZN	PPP0000WAMCN019002
370	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X 1.25,PLASTITE,STL,BLK SHRP	PPP0000PARTN016125
370	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X 1.25,PLASTITE,STL,BLK SHRP	PPP0000PARTN016125
501	SCREW,SELF-TAP,TRI,TORX,#8 X 1.25,PLASTITE,STAINLESS	PPP000000013451125
502	SCREW,SELF-TAP,TRI,TORX,#8 X .688,PLASTITE,STAINLESS,BLK OXID	PPP000000013450068
503	SQUARE PLASTI-GROMMET, #8 FSTNR, .375 SQ X .156 MAX THCK	PPP000000013381101
830	BLANKING PLATE, INTERFACE	PPP000000303538101
904	ARM COVER, FIXED, ANCHOR	PPP000000303514101
904	ARM COVER, FIXED, ANCHOR	PPP000000303514101
905	ARM COVER, FIXED, INNER	PPP000000303519101
905	ARM COVER, FIXED, INNER	PPP000000303519101
906	COVER, OUTER, FIXED ARM	PPP000000303415101
906	COVER, OUTER, FIXED ARM	PPP000000303415101
907	WASHER,FLAT,SAE TYPA,5/16,STL,CLR ZN	PPP00000WBCN031007
907	WASHER,FLAT,SAE TYPA,5/16,STL,CLR ZN	PPP00000WBCN031007
999	LITERATURE KIT, EFX800-16, MULTI-LANGUAGE--CHANGED P/N TO -900	PPP000000303488900

Parts List - Moving Arm Models

Parts list - EFX800 Moving Arm Models

Bubble Numbers	Item Description	Part Number
6	PCA, ACTIVE STATUS LIGHT, SPAM, 4 LED	PPP000000304016403
7	ASSY,CBL,MOD,8P8C,1-1,SILVER,130"	PPP000000044905130
9	ASSY, LPCA & SW, EFX800-16	PPP000000304079106
14	WIRE CLAMP, .25 INCH FASTENER, METAL WRAP STYLE	PPP000000013217101
16	ACTUATOR, LIFT,SELF POWERED EFX, W/O NUT (ROHS)	PPP000000303324102
20	MANTIS - UPPER PIVOT ANCHOR	PPP000000303456101
21	ASSY,MOVING ARM,LH	PPP000000303486101
22	ASSY,MOVING ARM,RH	PPP000000303486102
25	TRANSITION COVER, LINK, LEFT	PPP000000303529101
26	TRANSITION COVER, LINK, RIGHT	PPP000000303529102
30	ASSEMBLY, UPPER HHHR CONTACT WITH	PPP000000303502101
31	CONTACT, HHHR LOWER, STAINLESS	PPP000000302414101
32	ASSY, ACCESSORY TRAY & CROSSRAMP	PPP000000303523101
34	LIFT COVER, INTERFACE PLATE	PPP000000303416101
35	ASSEMBLY, LIFT COVER, LEFT SIDE	PPP000000303541101
36	ASSEMBLY, LIFT COVER, RIGHT SIDE	PPP000000303542101
37	ASSEMBLY, DISPLAY MOUNT WITH HHHR	PPP000000303610101
38	LIFT COVER, FRONT, ASSY	PPP000000303507101
39	LIFT COVER, ASSY, REAR	PPP000000303508101
40	LIFT COVER, TOP	PPP000000303409102
41	ASSY, GOOSE NECK & FRONT BADGE	PPP000000303524101
44	RAMP, FORMED	PPP000000303562102
45	ASSY, HINGE, RAMP	PPP000000303570101
46	ASSEMBLY, LIFT NUT AND YOKE	PPP000000303563101
49	WHEEL,OVERMOLDED,BLACK	PPP000000048336101
49	WHEEL,OVERMOLDED,BLACK	PPP000000048336101
50	ASSEMBLY, WHEEL TRUCK	PPP000000303550101
50	ASSEMBLY, WHEEL TRUCK	PPP000000303550101
54	FOOT PEDAL, RIGHT, LED BLUE ACCENT	PPP000000303467102
55	FOOT PEDAL, LEFT, LED BLUE ACCENT	PPP000000303467101
56	ASSEMBLY, LOWER LINK W/MTG. STUD	PPP000000303630101
60	GASKET, HHHR CONTACT	PPP000000302418101
62	BELT, DRIVE, 470J12 POLY V	PPP000000010217148
64	BELT, DRIVE, 240J8 POLY V	PPP000000010217149
65	ASSY, GENERATOR AND EDDY BRAKE	PPP000000303431101
67	ASSY, STEP UP PULLEY AND TENSIONER	PPP000000303433101
71	ASSY,CATCH LATCH AND RECEIVER	PPP000000304313101
72	BATTERY,SLA,12V,4AH,.187 TABS	PPP000000012258040
73	COVER, REAR LPCA MOUNT	PPP000000303624101
74	COVER, LPCA FINGER GUARD	PPP000000303627101
75	COVER, DRIVE DISK	PPP000000303490101
76	ASSY,COVER, DRIVE HOUSING, RH,W/TINNERMAN CLIPS	PPP000000303497101
77	ASSY,COVER, DRIVE HOUSING, LH, W/TINNERMAN CLIPS	PPP000000303493101
78	ASSY, DRIVE TOP COVER WITH CLIPS	PPP000000303527101
79	FUSE,SLOW,10A,32V,1/4 DIA	PPP000000010427151

86	FOOT,ADJUSTING,NO LOGO,WITH LOCK	PPP000000303093101
87	GASKET, NECK	PPP000000303412101
90	COVER, DRIVE ACCESS ASSEMBLY	PPP000000304363102
100	ISOLATOR, 7/16 BOLT, TOP HAT	PPP000000303438101
101	ISOLATOR, 5/16 BOLT, TOP HAT	PPP000000303509101
102	PLATE, TENSIONER TUG	PPP000000303432101
102	PLATE, TENSIONER TUG	PPP000000303432101
103	WHEEL, TRANSPORT W/ STEEL BUSHING	PPP000000303671102
105	MANTIS - HHHR COVER, FRONT	PPP000000303457101
106	HHHR COVER, LOWER RIGHT SIDE	PPP000000303459102
107	HHHR COVER, LOWER LEFT SIDE	PPP000000303459101
108	MANTIS - HHHR COVER, REAR	PPP000000303458101
150	FOOT, FIXED	PPP000000031074104
155	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
155	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
156	ASSY,CBL,16AWG,MINI FIT,QDK,10A SB,9"	PPP000000302130009
200	HARDWARE KIT, MOVING ARM, EFX800-16	PPP000000303498101
212	BEZEL, ACTIVE STATUS	PPP000000303475102
213	ROCKER, ACTIVE STATUS LIGHT	PPP000000303528102
216	NUT,PLAIN,HEX,3/8-16,STL,CLR ZN	PPP00000KMCN038034
216	NUT,PLAIN,HEX,3/8-16,STL,CLR ZN	PPP00000KMCN038034
219	CABLE TIE,17 LONG,WHITE,NYL	PPP000000010123116
250	COVER, TRUCK PIVOT, RIGHT	PPP000000303505102
251	COVER, TRUCK PIVOT, LEFT	PPP000000303505101
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
253	SCREW,FLAT HD SOCKET CAP,1/4-20 X .625,STL,CLR ZN	PPP0000MACCN025062
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
270	SPINDLE, PIVOT, WHEEL TRUCK,	PPP000000303511102
270	SPINDLE, PIVOT, WHEEL TRUCK,	PPP000000303511102
271	SCREW,SELF-TAP,TRI,PAN HD PHIL,#10 X 5/8,PLASTITE 48-2,STL,CLR ZN	PPP0000PARCN019063
271	SCREW,SELF-TAP,TRI,PAN HD PHIL,#10 X 5/8,PLASTITE 48-2,STL,CLR ZN	PPP0000PARCN019063
277	CUP, PEDAL MOUNT	PPP000000303521101
277	CUP, PEDAL MOUNT	PPP000000303521101
278	HHCS,3/8-16 X .75,NYLOCK,GR5 STL,CLR	PPP00000HCCE038075
278	HHCS,3/8-16 X .75,NYLOCK,GR5 STL,CLR	PPP00000HCCE038075
279	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
279	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050

86	FOOT,ADJUSTING,NO LOGO,WITH LOCK	PPP000000303093101
87	GASKET, NECK	PPP000000303412101
90	COVER, DRIVE ACCESS ASSEMBLY	PPP000000304363102
100	ISOLATOR, 7/16 BOLT, TOP HAT	PPP000000303438101
101	ISOLATOR, 5/16 BOLT, TOP HAT	PPP000000303509101
102	PLATE, TENSIONER TUG	PPP000000303432101
102	PLATE, TENSIONER TUG	PPP000000303432101
103	WHEEL, TRANSPORT W/ STEEL BUSHING	PPP000000303671102
105	MANTIS - HHHR COVER, FRONT	PPP000000303457101
106	HHHR COVER, LOWER RIGHT SIDE	PPP000000303459102
107	HHHR COVER, LOWER LEFT SIDE	PPP000000303459101
108	MANTIS - HHHR COVER, REAR	PPP000000303458101
150	FOOT, FIXED	PPP000000031074104
155	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
155	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
156	ASSY,CBL,16AWG,MINI FIT,QDK,10A SB,9"	PPP000000302130009
200	HARDWARE KIT, MOVING ARM, EFX800-16	PPP000000303498101
212	BEZEL, ACTIVE STATUS	PPP000000303475102
213	ROCKER, ACTIVE STATUS LIGHT	PPP000000303528102
216	NUT,PLAIN,HEX,3/8-16,STL,CLR ZN	PPP00000KMCN038034
216	NUT,PLAIN,HEX,3/8-16,STL,CLR ZN	PPP00000KMCN038034
219	CABLE TIE,17 LONG,WHITE,NYL	PPP000000010123116
250	COVER, TRUCK PIVOT, RIGHT	PPP000000303505102
251	COVER, TRUCK PIVOT, LEFT	PPP000000303505101
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
252	SCREW,SET,DOG POINT,3/8-16 X 1.25,NYLOCK,STL,BLK SHRP	PPP00000ERTE038125
253	SCREW,FLAT HD SOCKET CAP,1/4-20 X .625,STL,CLR ZN	PPP0000MACCN025062
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
254	CLIP,U TYPE, TINNERMAN, 1/4-20	PPP000000010136103
270	SPINDLE, PIVOT, WHEEL TRUCK,	PPP000000303511102
270	SPINDLE, PIVOT, WHEEL TRUCK,	PPP000000303511102
271	SCREW,SELF-TAP,TRI,PAN HD PHIL,#10 X 5/8,PLASTITE 48-2,STL,CLR ZN	PPP0000PARCN019063
271	SCREW,SELF-TAP,TRI,PAN HD PHIL,#10 X 5/8,PLASTITE 48-2,STL,CLR ZN	PPP0000PARCN019063
277	CUP, PEDAL MOUNT	PPP000000303521101
277	CUP, PEDAL MOUNT	PPP000000303521101
278	HHCS,3/8-16 X .75,NYLOCK,GR5 STL,CLR	PPP00000HCCE038075
278	HHCS,3/8-16 X .75,NYLOCK,GR5 STL,CLR	PPP00000HCCE038075
279	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
279	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050

279	SCREW, MACHINE, 10-24X1/2, PANHD, PHIL,BLK SHARPERIZED	PPP00000MGTN019050
286	COVER, PIVOT BLOCK OUTER	PPP000000303512101
287	INNER PIVOT BLOCK COVER, STAIRARM	PPP000000303513101
296	HHCS,3/8-16 X 4.00,NYLOCK,GR5 STL,CLR	PPP000000013460103
298	WASHER,FLAT,NARROW,1/2,GR8 STL,CLR	PPP00000WRCN050010
300	HOOK, WHEEL TRUCK	PPP000000303555101
300	HOOK, WHEEL TRUCK	PPP000000303555101
301	COVER, INNER LINK	PPP000000303468101
301	COVER, INNER LINK	PPP000000303468101
301	COVER, INNER LINK	PPP000000303468101
301	COVER, INNER LINK	PPP000000303468101
302	COVER, OUTER LINK	PPP000000303455101
302	COVER, OUTER LINK	PPP000000303455101
302	COVER, OUTER LINK	PPP000000303455101
302	COVER, OUTER LINK	PPP000000303455101
303	RETAINING RING,EXTERNAL,17.1,ROTOR CLIP P/N SH-66ST PA	PPP00000ABHN017001
305	COVER,PIVOT,MOVING ARM	PPP000000303479101
305	COVER,PIVOT,MOVING ARM	PPP000000303479101
306	ASSY,CBL,MOD,6P6C,1-1,24"	PPP000000304128024
307	ASSY,CBL,20AWG,6P5C,MINI-FIT,69"	PPP000000304108069
308	HHCS,3/8-16 X 2.50,SEMS .875 WASHER,NYLOCK,GR5 STL,CLR ZN	PPP0000HAECE038250
309	SPACER, RAMP PIVOT	PPP000000303572102
310	WASHER,FLAT,WIDE TYPA,3/8,STL,CLR ZN	PPP00000WCCN038008
310	WASHER,FLAT,WIDE TYPA,3/8,STL,CLR ZN	PPP00000WCCN038008
310	WASHER,FLAT,WIDE TYPA,3/8,STL,CLR ZN	PPP00000WCCN038008
312	SCREW,SELF-TAP,TRI,PAN HD PHIL,1/4-20 X .75,STL,BLK SHRP	PPP0000PANTN025075
312	SCREW,SELF-TAP,TRI,PAN HD PHIL,1/4-20 X .75,STL,BLK SHRP	PPP0000PANTN025075
315	SCREW,SELF-TAP,TRI,WASHER HD HEX,10-24 X .75,STL,CLR ZN,ERIELUBE	PPP0000PBDCA019075
315	SCREW,SELF-TAP,TRI,WASHER HD HEX,10-24 X .75,STL,CLR ZN,ERIELUBE	PPP0000PBDCA019075
315	SCREW,SELF-TAP,TRI,WASHER HD HEX,10-24 X .75,STL,CLR ZN,ERIELUBE	PPP0000PBDCA019075
316	HHCS,5/16-18 X 1.00,SEMS NARROW WASHER,NYLOCK,GR5 STL,CLR ZN	PPP0000HAECE031100
321	COVER, RAMP TO DRIVE TRANSITION	PPP000000303492101
322	FRAME COVER, FORWARD	PPP000000303454101
325	END CAP, FOOT	PPP000000303417101
328	WASHER,WAVE,OVERLAP,TRIPLE,.620,STL, SMALLEY P/N SSR-0087	PPP0000WAGNN062001
329	WASHER,FLAT,.75 X 1.125 X .031,STL	PPP00000WNNN075003
330	COVER, RAMP	PPP000000303413101
332	BOLT, DRIVE LUG	PPP000000303449101
333	ASSY, HCOM EFX INPUT PULLEY	PPP000000303446101
334	PLATE, INPUT PULLEY SUBSTRATE	PPP000000303447101
340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050

340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050
340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050
340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050
340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050
340	SCREW,SELF-TAP,TRI,PAN HD PHIL,#8 X .50,PLASTITE,STL,BLK SHRP	PPP0000PARTN016050
352	SPACER, COILED SHEET, 5/16 ID X .462 OD X 2-1/8 LG, #200450134	PPP000000013305101
353	BOLT,CARRIAGE,5/16-18 X 3.00,GR5	PPP00000BACN031300
353	BOLT,CARRIAGE,5/16-18 X 3.00,GR5	PPP00000BACN031300
354	HHCS,5/16-18 X 2.50,FULLTHREAD,GR2	PPP00000HJCN031250
354	NUT,5/16-18,HEX FLANGE,NYLON INSERT,GR5 STL,CLR ZN	PPP0000KBTCN031038
355	HHCS,5/16-18 X 2.50,FULLTHREAD,GR2	PPP00000HJCN031250
356	NUT,5/16-18,HEX FLANGE,NYLON INSERT,GR5 STL,CLR ZN	PPP0000KBTCN031038
361	HHCS,1/2-13 X 1.75,NYLOCK,GR8 STL,CLR	PPP00000HECE050175
363	HFS,3/8-16 X 2.00,NYLOCK,GR5 STL,CLR ZN	PPP000000013516102
363	HFS,3/8-16 X 2.00,NYLOCK,GR5 STL,CLR ZN	PPP000000013516102
363	HFS,3/8-16 X 2.00,NYLOCK,GR5 STL,CLR ZN	PPP000000013516102
365	WASHER,EXTERNAL TOOTH	PPP0000WAMCN019002
501	SCREW,SELF-TAP,TRI,TORX,#8 X 1.25,PLASTITE,STAINLESS	PPP000000013451125
502	SCREW,SELF-TAP,TRI,TORX,#8 X .688,PLASTITE,STAINLESS,BLK OXID	PPP000000013450068
503	SQUARE PLASTI-GROMMET, #8 FSTNR, .375 SQ X .156 MAX THCK	PPP000000013381101
830	BLANKING PLATE, INTERFACE	PPP000000303538101
907	WASHER,FLAT,SAE TYPA,5/16,STL,CLR ZN	PPP00000WBCN031007
907	WASHER,FLAT,SAE TYPA,5/16,STL,CLR ZN	PPP00000WBCN031007
999	LITERATURE KIT, EFX800-16, MULTI-LANGUAGE—CHANGED P/N TO -900	PPP000000303488900

Appendix A : Edition Information

Edition

Title: Experience Series 800 Line EFX Service Manual

P/N: 20039-206

Additional Documentation

You can also view the service manual online at Online Service Manual

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Precor Incorporated
20031 142nd Ave. NE
P.O.Box 7202
Woodinville, WA. 98072-4002
Ph: 1-800-347-4404

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Appendix B : Notices and Safety

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Safety Instruction

Read all safety instructions in the documentation provided with your exercise equipment, including all assembly guides, user guides, owner's manuals including the follow safety guideline before servicing this unit. Always follow Warning and Caution notices to prevent personal injury and/or damage the equipment.

Safety Notices

Warning and Caution notices indicate an activity that could be dangerous and cause personal injury and/or equipment damage if not adhered to. Always follow Warning and Caution

instructions.

Warning

A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood.

Caution

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood.