Trendsetter News (MPE)

Preloader Interface Installation

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Revision History

Revision	Date	Author	Comments
A	Jul 5, 2002	Ray Levasseur	First release

CONTENTS

Revision History i

1. Reference Documents 1

2. Preloader Interface Installation 1
   2.1 Firmware Installation 1
   2.2 Hardware Installation 2

1. REFERENCE DOCUMENTS

Refer to the following documents;

- **72-3733A-A-SP01.doc** – Preloader Interface specification for the technical details of the interface. The signal definition and pin assignment are detailed in the interface specification.
- Firmware release notes of firmware version 1.18 for MPE version machines.
- **Preloader_Flow_Chart2Rev2.vsd** – The flowchart details the sequence of operations with a Trendsetter operated with a Preloader.

2. PRELOADER INTERFACE INSTALLATION

2.1 Firmware Installation

The Trendsetter News with MPE electronics requires firmware upgrades to communicate with the Preloader. Check the list version for the firmware version. It must be 1.18 or higher to support the preloader option. The firmware must be downloaded into the MPE (refer to Creo Service for procedures on downloading firmware). The new firmware has an NVS parameter that sets the Trendsetter to work with a Preloader option. The command to activate the preloader is “set al preloader 1” then do an “nvs save al”. The workstation Printconsole software will now recognize the PL-T device and all input / output commands will function properly. The diagnostics display of the Trendsetter is through the Service Shell application.

Service Shell screen display when the preloader is not installed but the preloader option is enabled.

```
>> preloader

Preloader status:

    Power on      = 0

    Fault         = 1

    In place      = 0

    Loading       = 1

    Cables Detected

Trendsetter outputs:

    Fault         = 0

    Picker clear  = 0

    Request plate = 0
```

Service Shell screen display when the preloader is installed, powered on, no faults, moved into position and in standby mode.

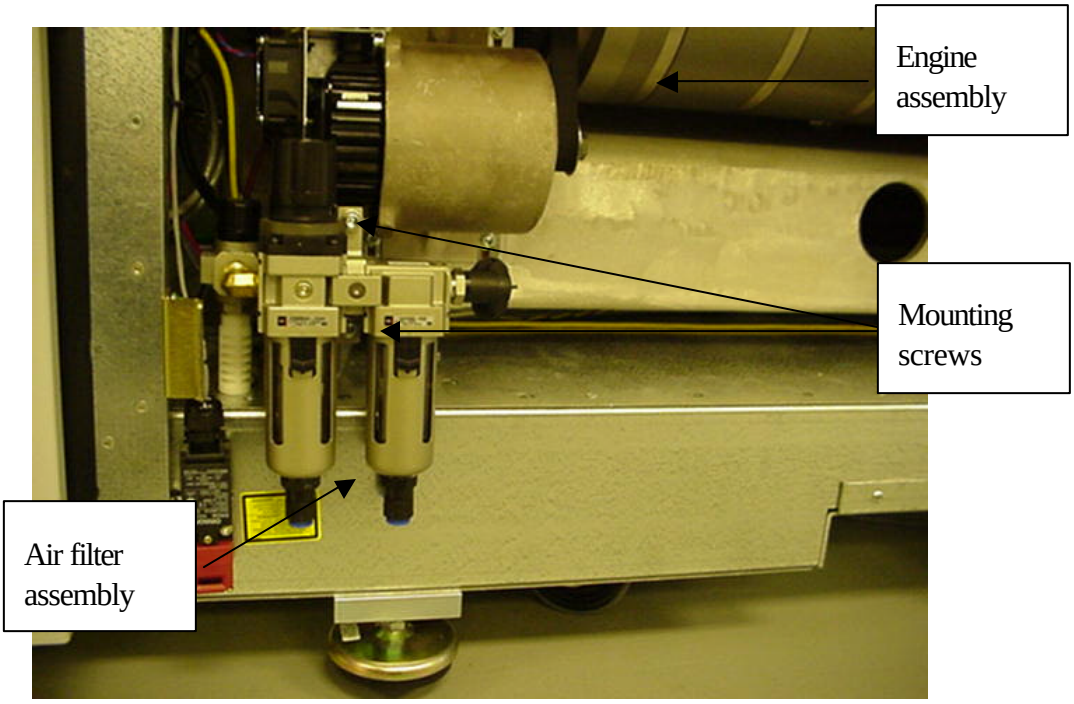
```
>> preloader
Preloader status:
    Power on     = 1
    Fault        = 0
    In place     = 1
    Loading      = 0
    Cables Detected
Trendsetter outputs:
    Fault        = 0
    Picker clear  = 0
    Request plate = 0
```

2.2 Hardware Installation

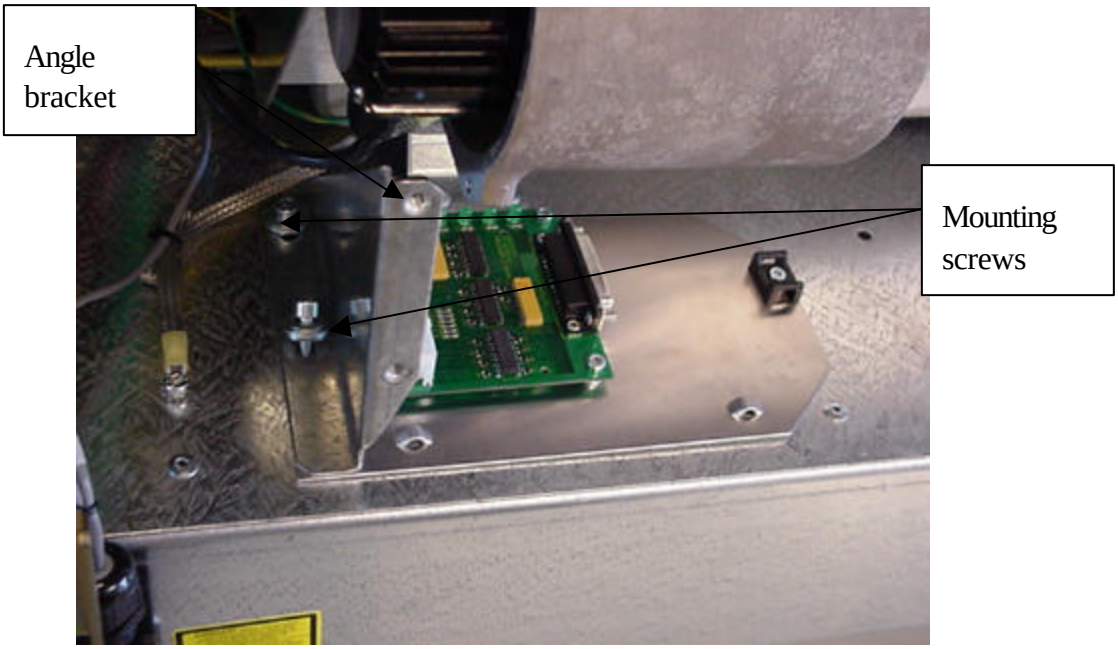
SAFETY NOTE: The power to the machine MUST be removed and the air supply to the machine shut down as well.

STATIC NOTE: Use an antistatic wrist strap when connecting cables to the TEE board and preloader I/F board. Always have the ground connection to the machine chassis to ensure any static is discharged to ground.

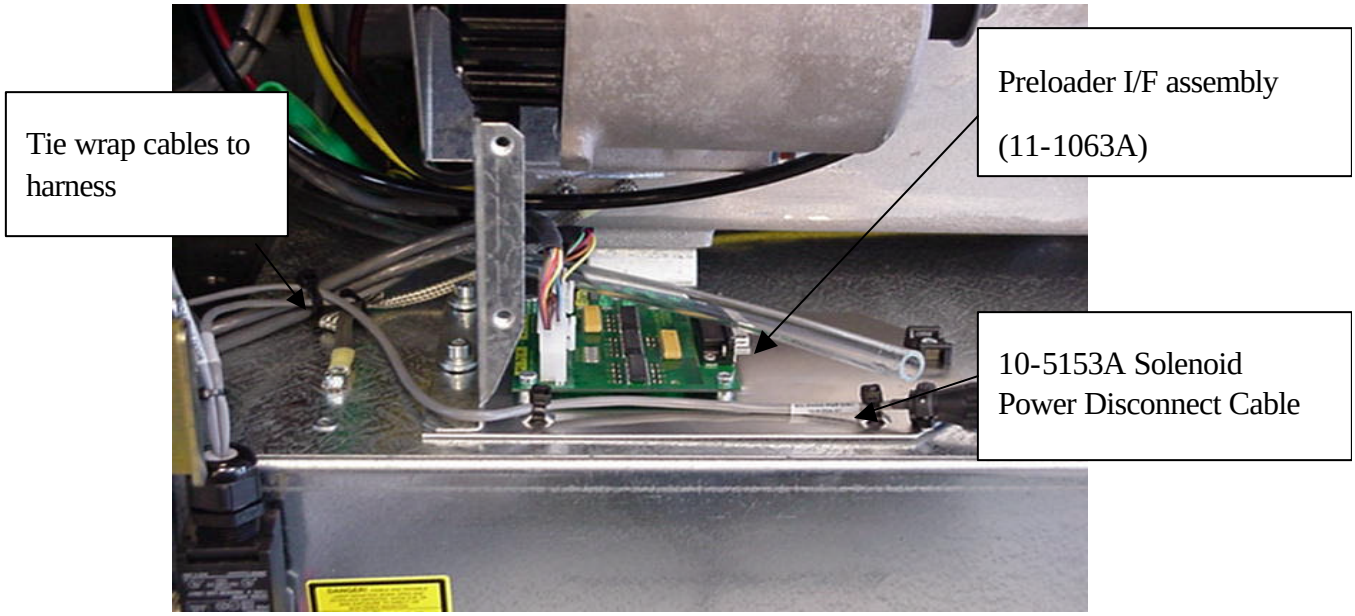
The Preloader interface assembly kit contains the following parts 10-5094A cable (from preloader I/F board J2 to the TEE board J22), 10-5095A cable (from preloader I/F board J3 to the TEE board J5), 10-5153A Solenoid power disconnect and 11-1063A preloader I/F pcb assembly installed on a metal bracket. The following photos show the installation of the preloader I/F board assembly as well as the cables into the power box. The installation was done on an older version machine, some differences may be visible between these photos and the actual machine but the location, mounting method and general procedure is the same.



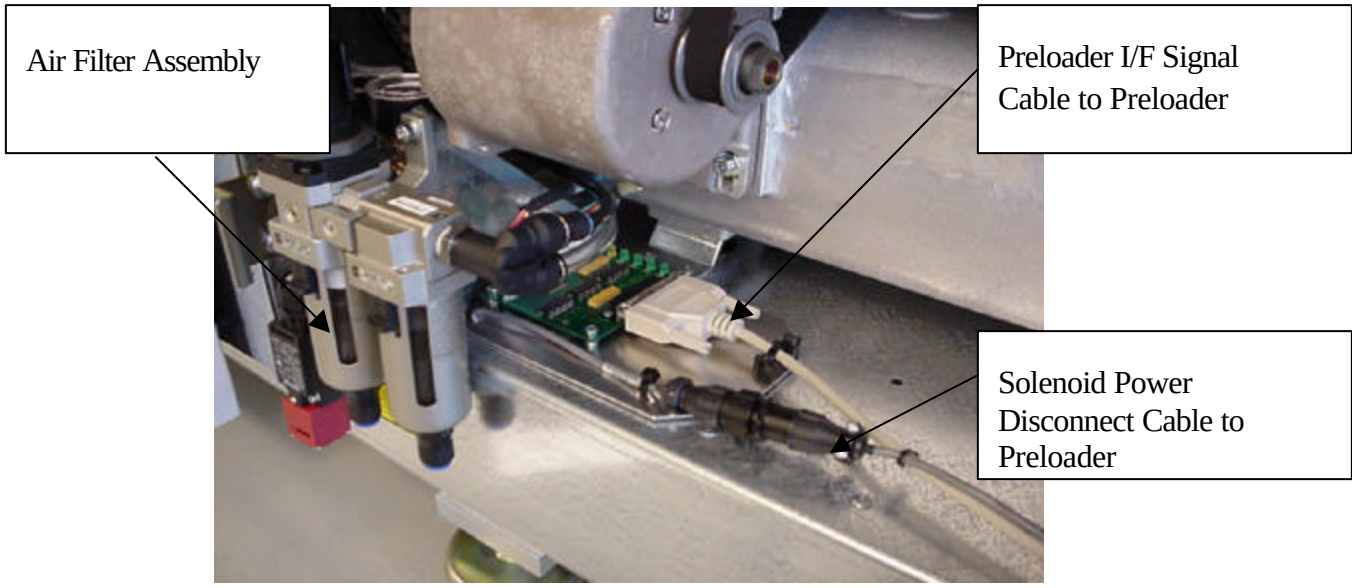
1) Open front door to view the engine compartment and get access to the air filter assembly and remove 2 mounting screws (M5 hex head).



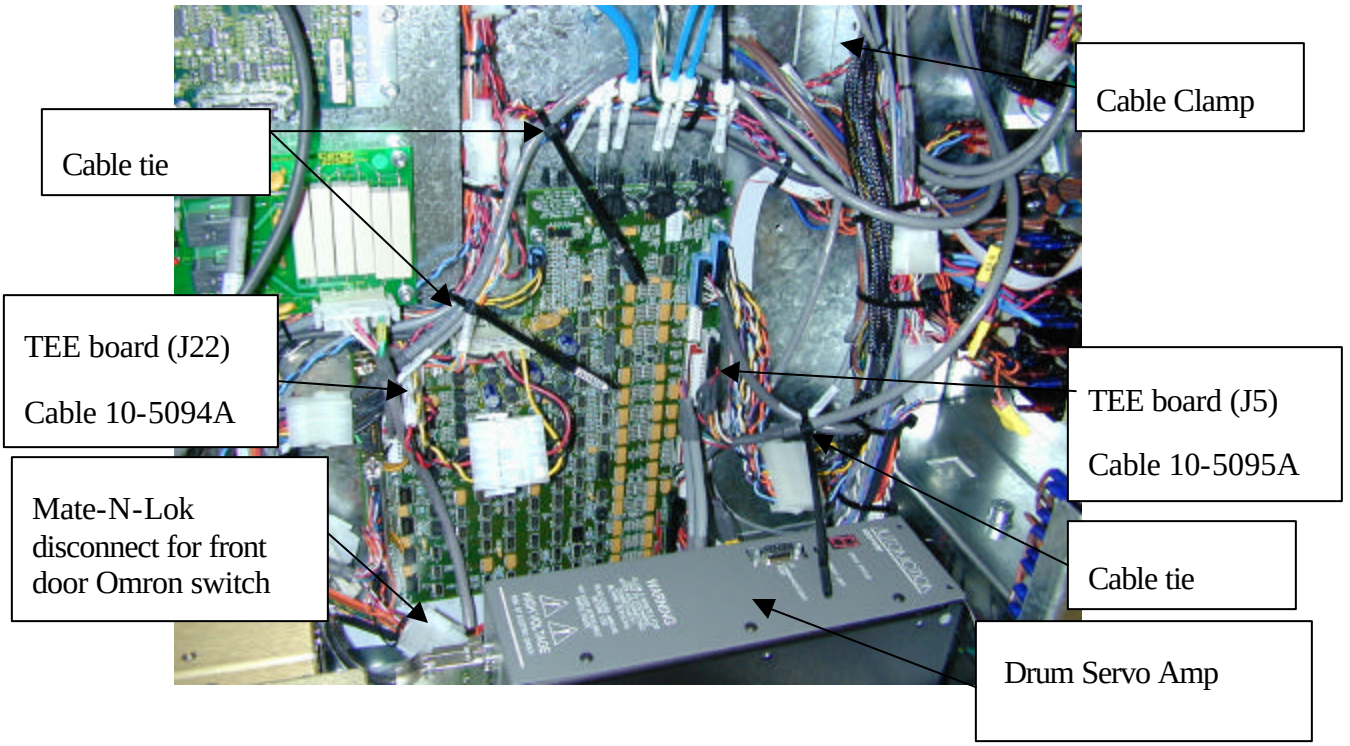
2) It may be necessary to remove the air lines (green or black hose) to improve access to bracket and unscrew 2 mounting screws (M5 hex head) to remove angle bracket. Air filter assembly has been removed.



3) Slide Preloader I/F assembly under the angle bracket and align the plate mounting holes with the holes of the angle bracket. Tighten both screws and ensure the bracket holds the assembly securely. Install the Trendsetter internal cables (10-5094A & 10-5095A) to J2 and J3 of the Preloader I/F board and strain relief them to an existing wire harness with tie wraps. Install the 10-5153A solenoid power disconnect cable to the bracket with tie wraps with the circular connector close to the end of the bracket. The other ends of the cables go into the power box so they must be routed to the left of the bracket.

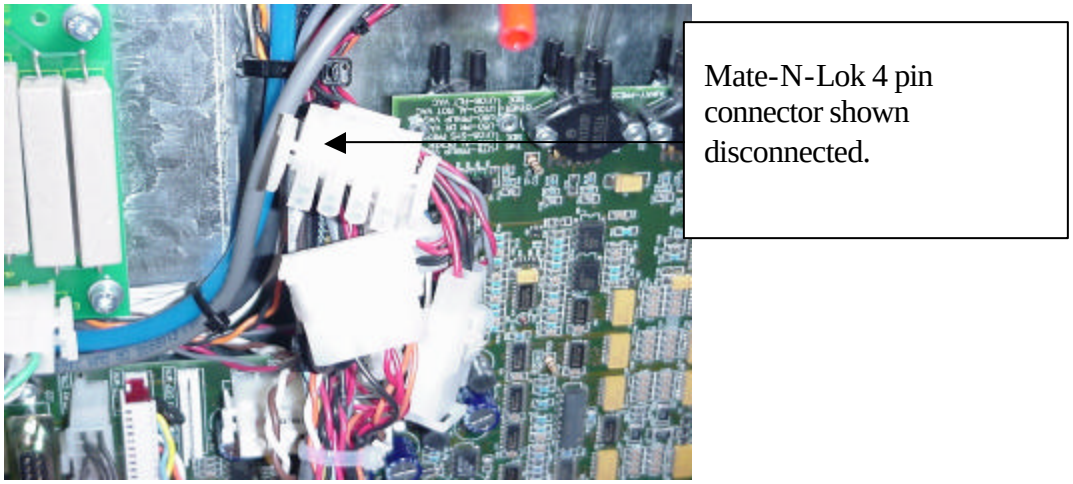


4) Re-install the air lines securely into the air couplings, if removed in step 2. Place the air filter assembly onto the angle bracket and fasten with the 2 screws. Install the preloader I/F signal cable from the preloader to the 25pin dsub connector on the board (provided by the preloader supplier). Install the solenoid power disconnect cable, circular type of connector (provided by the preloader supplier).

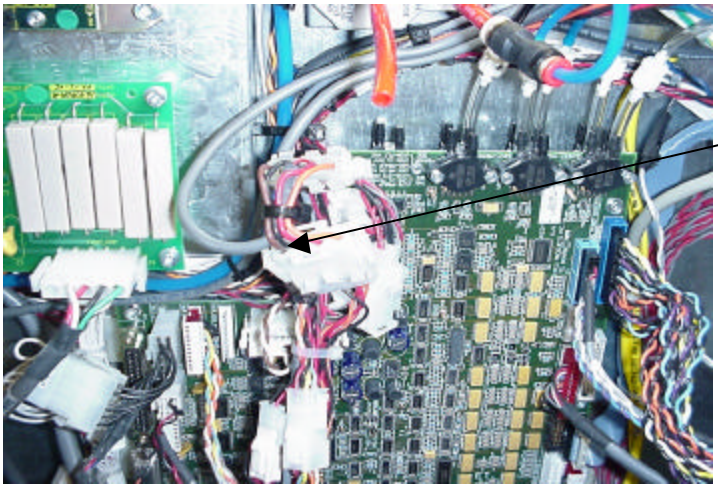


5) Open power box door to access TEE (Trendsetter Engine Electronics) board. Loosen the cable clamp and route the 3 internal cables from the engine compartment along with the other power box cables. Tie wrap the cables, as shown in the photo, to the existing wire harness. The 10-5094A cable which has the 37pin Dsub connector should be routed to J22 and the 10-5095A cable routed to J5.

6) Locate the Mate-N-Lok disconnect for the top plate loading door Omron switch (could be located near the drum servo amp or as in the photo below). The connector is a 4-pin Amp Mate-N-Lok soft shell style of connector. One side of the cable disconnect may have the cable part number on it 10-3805.



7) Disconnect the 4pin connector as shown above.



8) Plug in the mating Mate-N-Lok connectors from the solenoid power disconnect cable (10-5153A) into the 2 connectors that are open. Note this cable provided the hardware "preloader in place" function so when the preloader is in place it will re-energize the picker solenoids.

9) Ensure all of the cables are securely attached to the wire harness and plugged into the TEE board connectors. Cut tie wraps flush and tighten cable clamp to secure the power box cables. Close the power box door.

10) The firmware in the MPE must be upgraded to the new release for the hardware connections to work (refer to 2.1).

11) The Preloader system is now ready to operate with the Trendsetter.