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Author: John Gallagher

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Hydraulic Clutch Adjustment for ProStar + Vehicles

Applies To:

ProStar + Vehicles with Hydraulic Clutch

DESCRIPTION

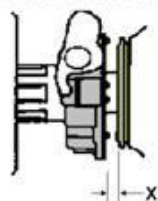
Internal and External Hydraulic Clutch Adjustment Procedures

SYMPTOMS

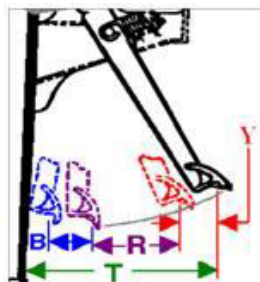
- Engine will not start
- Transmission grinds going into gear
- Excessive clutch pedal free travel
- No clutch pedal free travel

CRITICAL CLUTCH DIMENSIONS**- Clutch Release Bearing Measurement**

X = Clutch Release Travel



- X, Clutch Release Bearing Travel
 - Distance of gap between release bearing (clutch engaged position) & clutch brake.
 - Desired measurement = 0.53 inch
 - Tolerance Range = 0.5 to 0.56 inch.
- How to Measure:
 - Ensure clutch pedal is fully released (clutch is fully engaged).
 - Use appropriate tools to determine gap distance.

- Clutch Pedal Measurement

- Y, Clutch Pedal Free Play
 - Distance the clutch pedal travels from the top position (pedal fully released and clutch fully engaged) until the master cylinder push rod contacts the master cylinder piston.
 - Desired distance = 0.5 inch.
 - Tolerance Range = 0.5 ± 0.1 inch.
- Reference Dimensions:
 - R = Release Pedal Travel
 - B = Brake Squeeze Travel (at pedal)
 - T = Total Clutch Pedal Travel

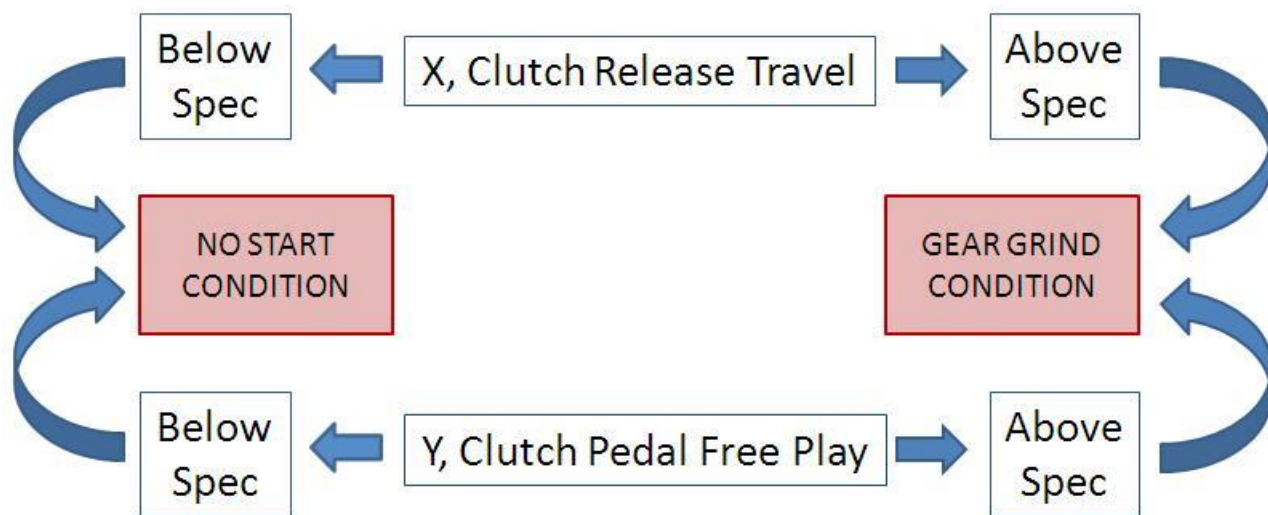
- How to Measure Clutch Free Play



- Measuring Clutch Pedal Free Play
 - Choose a common reference point on the clutch pedal to measure from.
 - Choose a common reference point in the cab to measure to.
 - With clutch pedal fully released (clutch fully engaged), take first measurement.
 - Apply hand force on pedal until free play is taken up. Take second measurement.
 - Record the differences of the two measurements

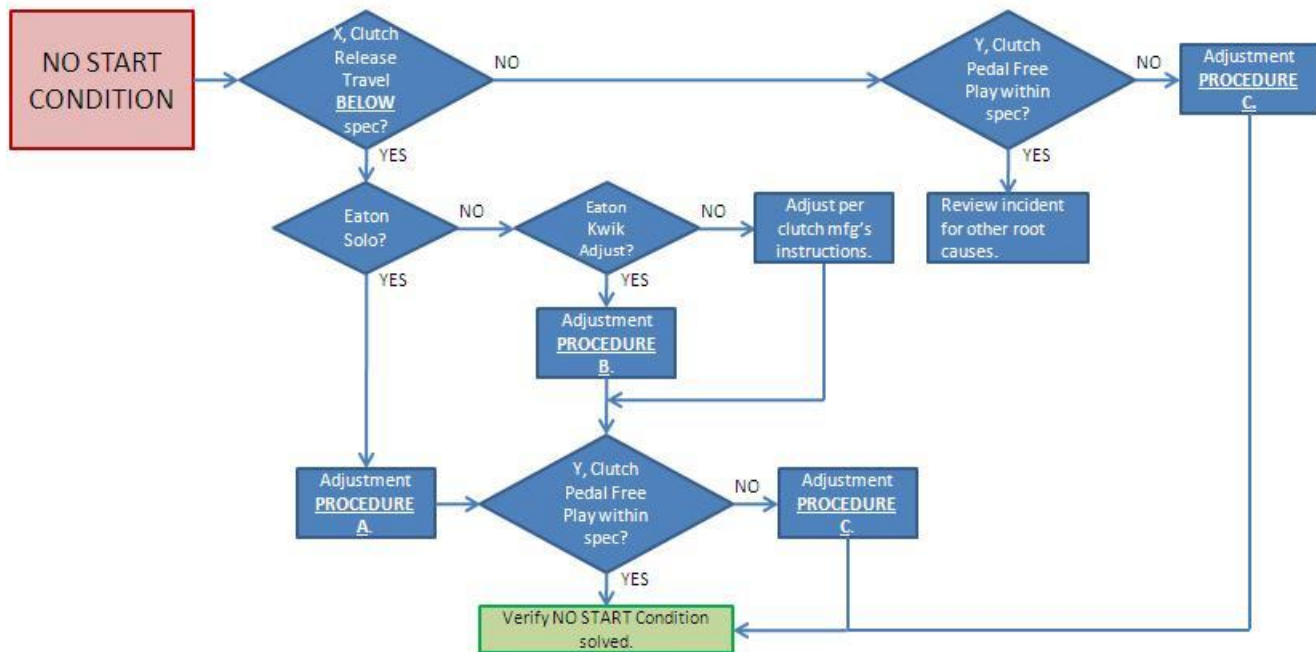
FAILURE MODES OF INCORRECT CLUTCH ADJUSTMENT

Reasons For Gear Grind and No Start Conditions



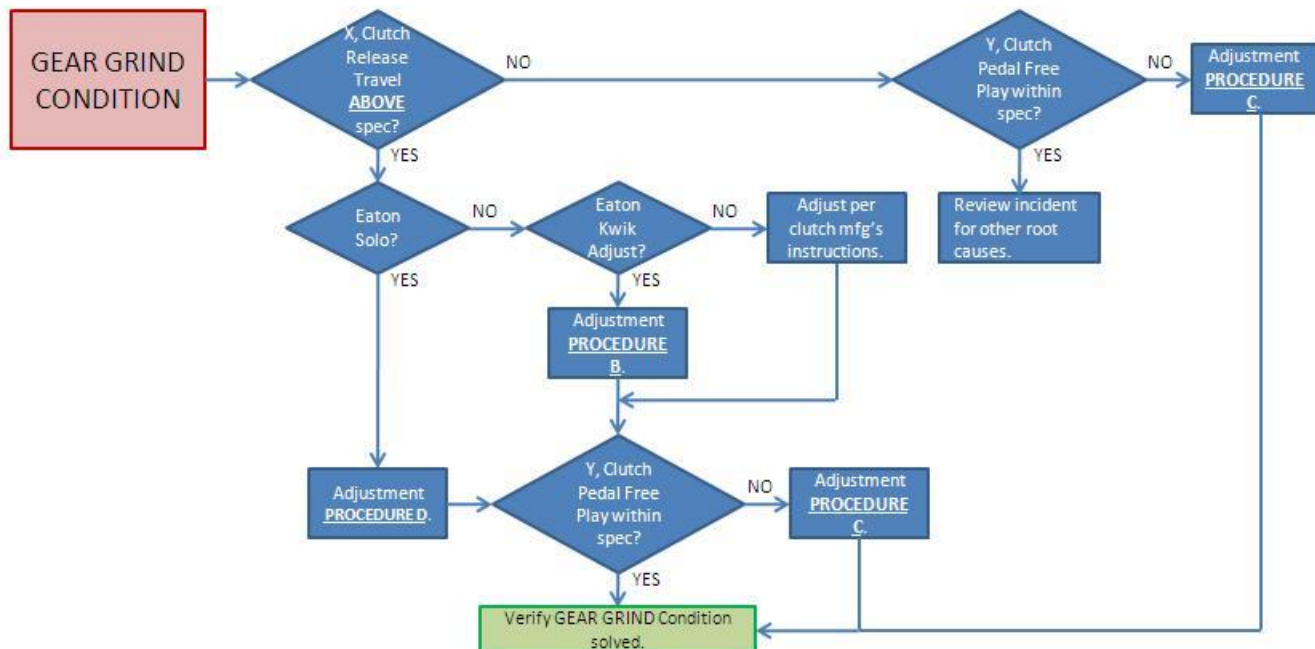
NO START CORRECTION PROCEDURE

No Start Correction Procedure



GEAR GRIND CORRECTION PROCEDURE

Gear Grind Correction Procedure



INTERNAL AND EXTERNAL CLUTCH ADJUSTMENT PROCEDURES

Adjustment Procedures

Adjustment PROCEDURE A.

- 1) Reset Eaton Solo clutch spring loaded cams per Eaton's instructions.
- 2) Complete PROCEDURE D.

Adjustment PROCEDURE B.

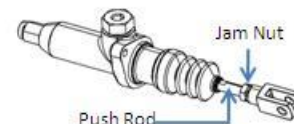
- 1) Adjust Eaton Kwik Adjust clutch per Eaton's instructions.
- Adjustment can be made without disturbing master cylinder.

Adjustment PROCEDURE C.

- 1) In cab, loosen jam nut on master cylinder push rod.
- 2) Rotate master cylinder push rod to adjust free play.
- 3) Re-tighten jam nut.
- 4) Confirm **Y, Clutch Pedal Free Play** dimension is within Tolerance Range (0.5 to 1.0 inch).

Adjustment PROCEDURE D.

- 1) In cab, loosen jam nut on master cylinder push rod.



- 2) Rotate master cylinder push rod until free play is removed from the system and re-tighten jam nut.
- 3) Actuate clutch pedal 5 times in order to set Solo clutch.
- 4) Confirm **X, Clutch Release Travel** dimension is within Tolerance Range (0.5 to 0.56 inch).
- 5) Again, loosen jam nut on master cylinder push rod.
- 6) Rotate master cylinder push rod to original position to restore free play and re-tighten jam nut.

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DYYNJZ1	Nick Zogelman	SE003, Service Manager	WILLIAMS SERVICE (847772 - 000)	WOULD HAVE BEEN NICE TO HAVE THIS INFO A YEAR AGO BUT IT IS NICE TO HAVE NOW	9/20/2011 3:01:43 PM