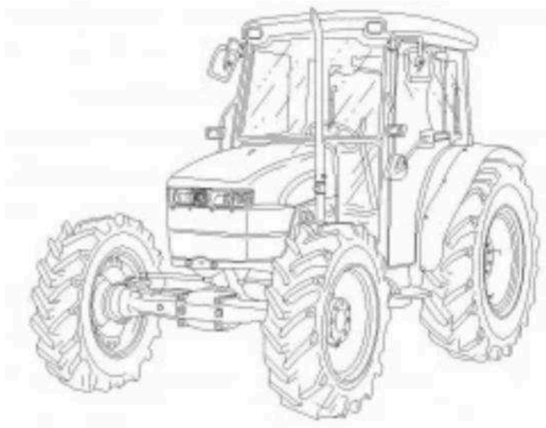
NEW HOLLAND



TN55D
TN55S
TN65D
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TN70D
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TN75D
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Tractors

REPAIR MANUAL

NEW HOLLAND AGRICULTURE

SERVICE

87059380

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The following pages are the collation of the contents pages from each section and chapter of the TND and TNS Series Repair manual. Complete Repair part # 87059380.

The sections used through out all New Holland product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the TND and TNS Series Tractors.

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SECTION 00 - GENERAL

BOOK 1 - 87059381

Chapter 1 - General

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SECTION 10 - ENGINE

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Chapter 1 - Engine

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SECTION 10 - ENGINE

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FAULT CODE 14 – MAIN (C1) GEAR SHIFT SWITCH SIGNAL VOLTAGE SHORT TO 5 OR 12 VOLTS.

NOTE: *On all Transmissions the Status Lamp (Gear with a Slash) will flash in a alternating manner.*

Conditions:

1. While tractor is being driven, voltage at ECM connector 2, pin 4 goes above 4.2 volts.
2. While tractor is in neutral, voltage at ECM connector 2, pin 4 goes above 4.2 volts. Clutch Packs are at maximum pressure but no movement seen while Main (C1) Gear Shift Switch reports to be engaged, (Wheel Speed Sensor signal not reliable or tractor is not moving).

Causes:

- Faulty wiring; circuit is shorted to 12 volts between ECM connector 2, pin 20 and Main (C1) Gear Shift Switch, or short to 5v volts between switch terminals, or short 5 or 12v between switch and ECM connector 2, pin 4. Or common 5 volt sensor supply wire from ECM connector 2, pin 20 is shorted to 12v between switch and any other 5 volt sensor.
- Faulty Main (C1) Gear Shift Switch.
- Faulty ECM.

Tests:

- H9, Channel 16 value is above 860 counts.
- H5, doesn't display transition between d0 and d33.

Effects of Condition 1:

- The Transmission Status Lamp is flashing.
- Main (C1) Gear Shift Switch neutral position can not be detected.
- Transmission is disabled, but can be re-enabled by cycling the Power Shuttle FNR Lever or Clutch Pedal, and Main (C1) Gear Shift Lever.

Effects of Condition 2:

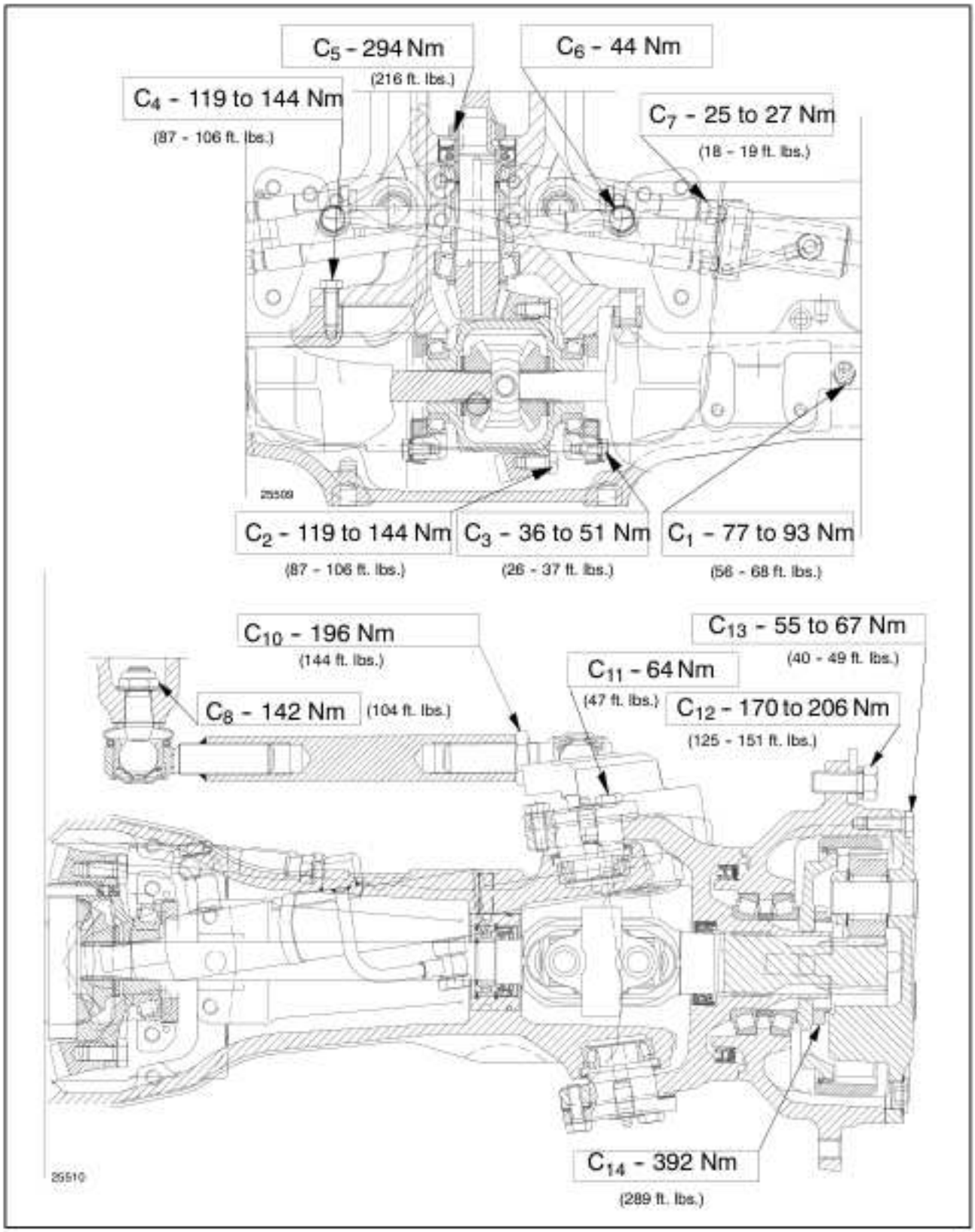
- Transmission is modified; Main (C1) Gear Shift Switch neutral position can not be detected, so ECM assumes position is in gear. If Wheel Speed Sensor signal is not reliable, (**Error Code 49**), then transmission is critically disabled, (no increase in wheel rotation when the Clutch Pack is at maximum pressure causes the Dump Solenoid to be energized which returns oil to sump). If Wheel Speed Sensor signal is reliable, (no error), then transmission attempt to move is conducted, (when the Clutch Pedal released and Power Shuttle FNR Lever engaged into a direction).

Recovery:

- Cause must be resolved and error must be cleared using the CDU or EST, HF Menu.

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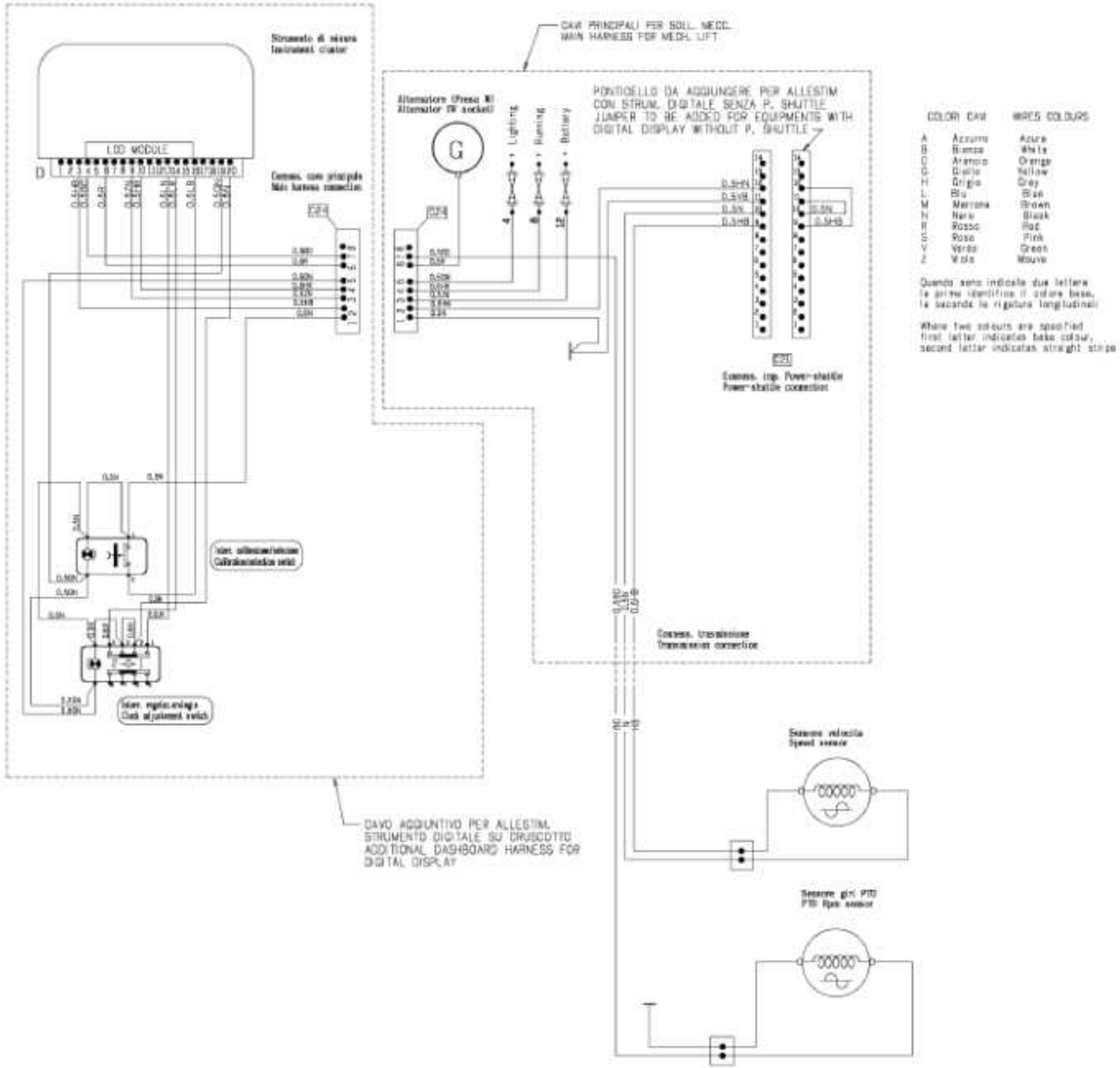
TIGHTENING TORQUES (CONT.)



1

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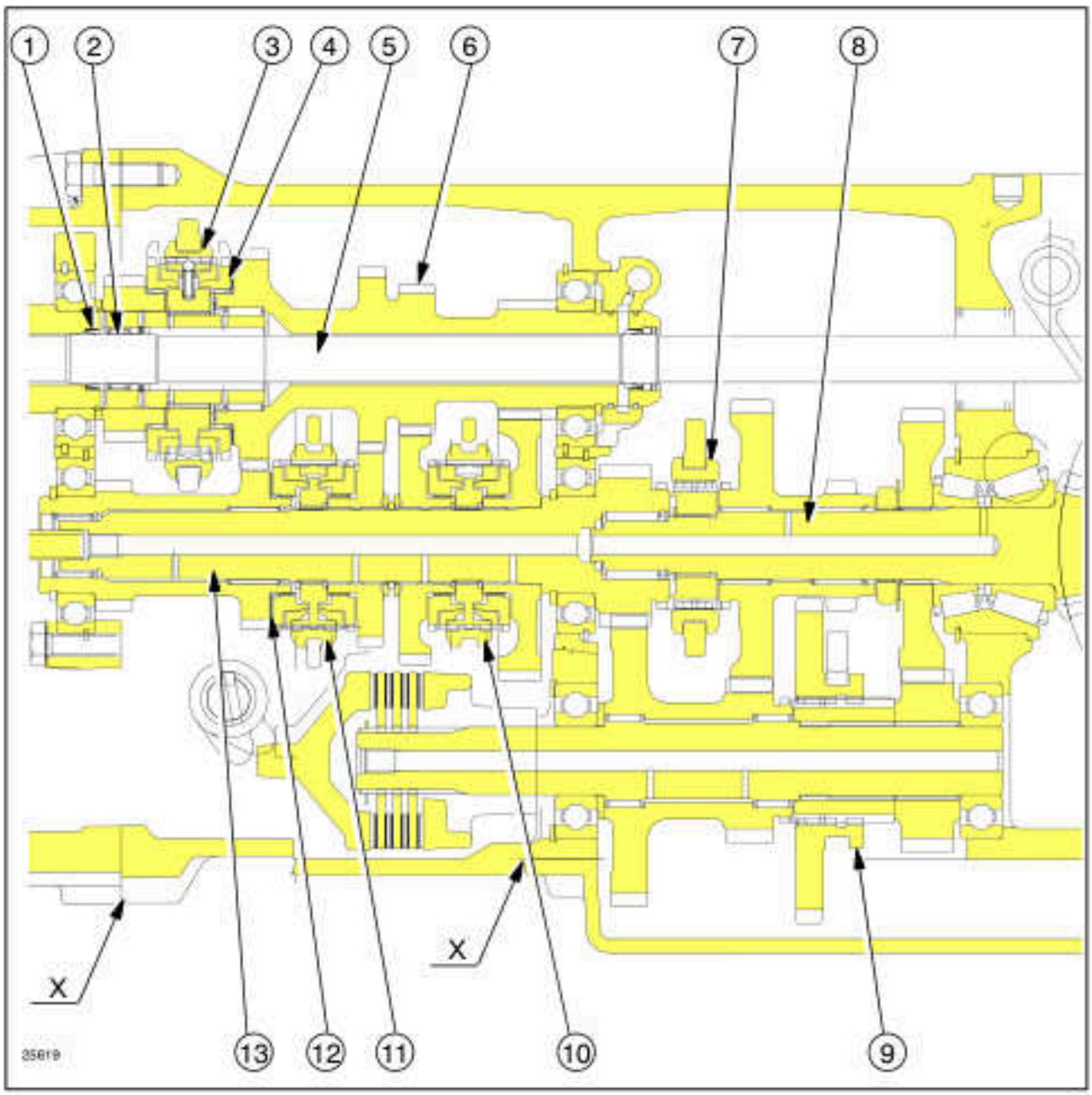
DIAGRAM D **DIGITAL INSTRUMENT CLUSTER HARNESS**



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SECTIONAL VIEWS



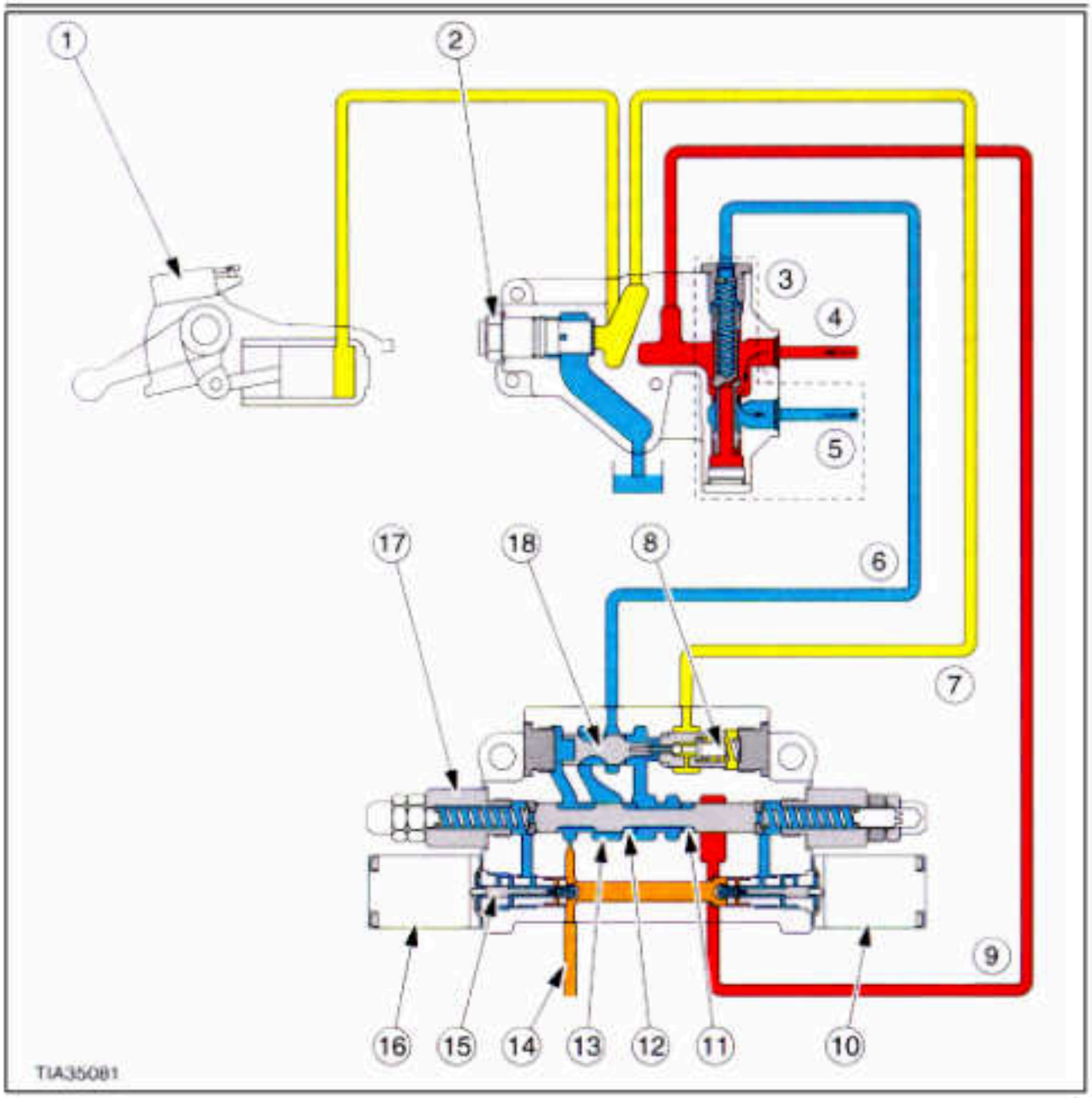
6

Longitudinal cross-sectional view of gearbox and gear range (16 + 16 Synchro-Command)

1. Seal.
2. Power take-off shaft support roller bearings.
3. Shuttle control synchronizer.
4. Gearbox driving gear clearance adjusting thickness.
5. Power take-off shaft.
6. Gearbox driving gear.
7. Selector sleeve for high or medium-low speeds.
8. Bevel pinion shaft.
9. Selector sleeve for low or medium-high speeds.
10. Synchronizer for 1st and 2nd speed.
11. Synchronizer for 3rd and 4th speed.
12. Gearbox driven shaft gear clearance adjusting thickness.
13. Gearbox driven shaft.

NOTE: *When fitting apply sealing compound to surfaces* ***X*** *as shown on 31.*

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Electronically controlled lift functional diagram. Neutral phase.

1. Hydraulic lift.
2. Lift cylinder safety valve.
3. Load maintaining valve.
4. Hydraulic pump flow.
5. Discharge in transmission casing.
6. Load measuring line.
7. To the Hydraulic lift.
8. Non-return valve.
9. Pump flow to hydraulic control valve.
10. Solenoid valve (Lowering).
11. Control valve block pin infeed dosage device.
12. Control valve block pin return to tank dosage device.
13. Oil discharge hole.
14. Low pressure circuit pilot pressure.
15. Pilot valve.
16. Solenoid valve (Lifting).
17. Control valve block pin centering spring.
18. Lifting valve.

Pump delivery oil.

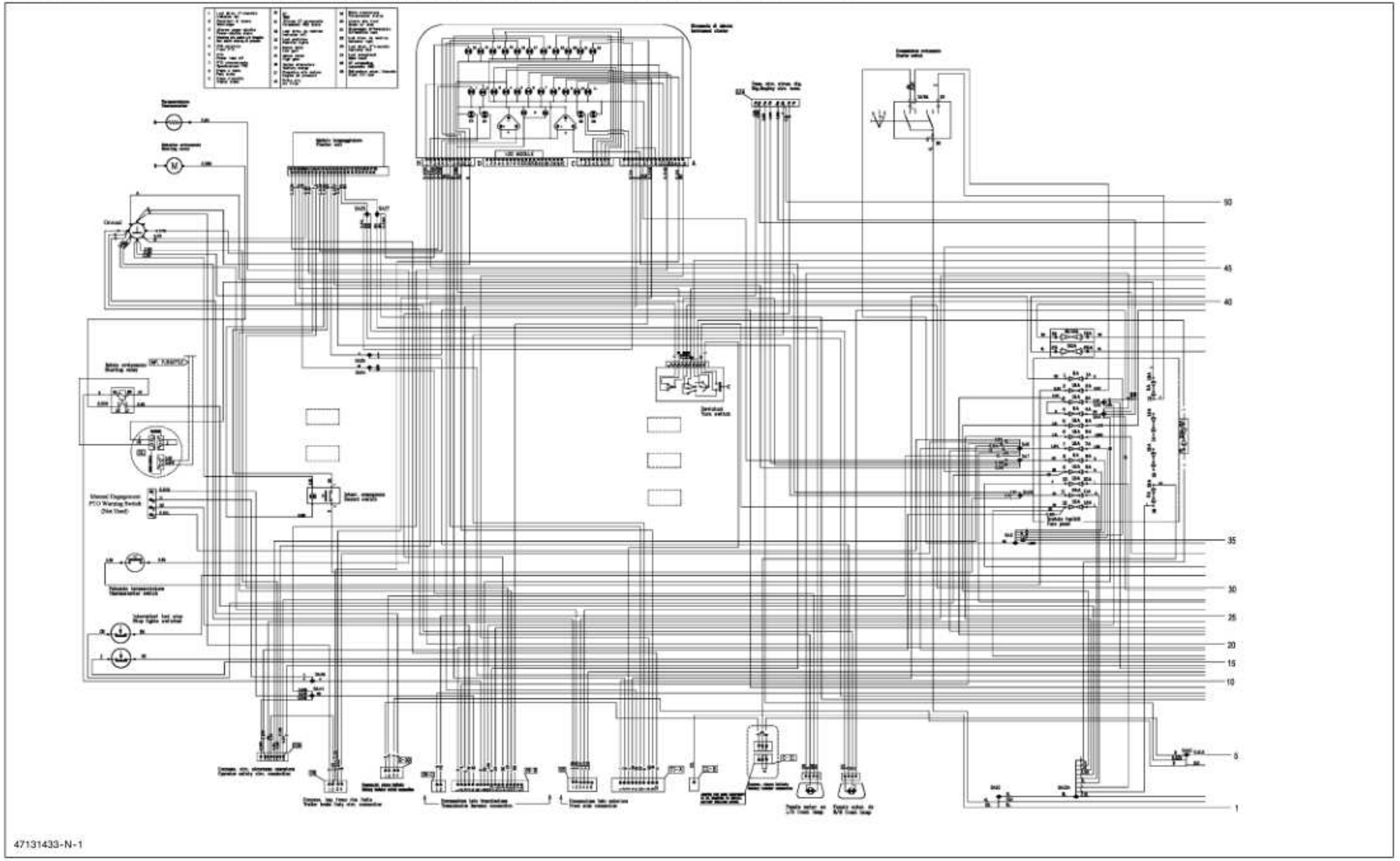
Discharge oil.

Pilot oil at a pressure of 16 bar.

Static oil.

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DIAGRAM N-1 **2WD (MECHANICAL 4WD) / MECHANICAL LIFT / MECHANICAL DIFF LOCK / WITH CAB**



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